

9

FEBRUARY 1988

A SOVIET WEEKLY
OF WORLD AFFAIRS

NEW TIMES

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AN IDEAL
OR A NIGHTMARE





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NEW TIMES

No. 9, February 1988
Founded 1943

Editor-in-Chief
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Associate editors:
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S. GOLYAKOV,
V. KULISTIKOV,
L. MLECHIN,
A. PIN,
D. POGORZHEL'SKY,
A. PUMPYANSKY,
Y. SHEYCHENKO,
V. STARSHINOV

Designer **I. Shein**

Editor of English edition:
E. Smirnov



Perestroika calls for vigour, creativity and independent thinking. Therefore, everything connected with all the problems relating to school education and upbringing have directly to do with perestroika. The February plenary meeting of the CPSU Central Committee discussed the functions of schools at all levels, the reorganization of the education system and the ideological renovation of all Soviet society.

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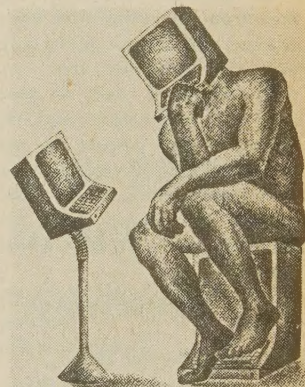
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Cover by **Alexander Groshev**

Our address: Pushkin Square, Moscow, GSP, 103782, U.S.S.R. Telephones: 229-88-72, 209-07-67

Published in Russian, English, French, German, Spanish, Portuguese, Italian, Polish,

Czech and Greek ● Telex: 411164a NEWT SU, 411164b NEWT SU, 411164c NEWT SU ● Cables: New Times

Pushkin Square Moscow ● Printed by the Moskovskaya Pravda press in the Union of Soviet Socialist Republics

REPERCUSSIONS OF THE SUMMIT

Only the beginning

Although the treaty signed in Washington marks an important stage in disarmament, it is only the first stage. If it has proved possible to eliminate missiles with a range of from 500 to 5,500 kilometres, why not also get rid of shorter-range missiles, as well as of the rest, which, if I'm not mistaken, are called strategic missiles? That is why I look forward with hope to the meeting of the leaders of the two powers in Moscow, where possibly another, more radical treaty on reducing nuclear weapons will be signed.

I'm glad that common sense is triumphing today in international relations. And I recall 1945, when I first encountered Soviet people. It was the crew of a tank that had fought its way into our embattled city. The tank crew were ready to give their lives for freedom, and the future of the people of my country. The Soviet people have remained the same today: fighters for peace and the happiness of mankind the world over.

PETER BILEK
Ostrava,
Czechoslovakia

Unique chance

At last we have taken a step, albeit a small one but real, for all that, towards a comprehensive system of world security. We followed with keen interest the signing of the treaty on the

elimination of medium- and shorter-range missiles. I would like to hope that the treaty will be ratified. I have no doubts as to what will happen when it comes to the U.S.S.R. Supreme Soviet. But they do arise when I think of the American Senate. Yet I still think that the peace movement and the world public will convince the U.S. administration that ratification of the treaty, without any amendments, just as it was

signed, offers a unique chance to make mankind's future safer.

I would like New Times to publish an article about the work put in by those who prepared the documents for signing at the summit. It must have been a titanic and stressful task requiring immense effort. And the job was done brilliantly!

RALF WEICHOLD
Hermsdorf, G.D.R.

READERS' QUESTIONS

...on "blanks"

Many of the "blank spots" in your history are now being filled in. I firmly believe that those who think this plays into the hands of the enemies of socialism are mistaken. On the contrary, it deprives them of the possibility of capitalizing on this and lying. But, still, the press so far has given too little attention to certain periods in your history. And because of this, we are often unable to refute slanderous attacks on the U.S.S.R. Surely it is impossible to be too frank when your own

past is analyzed, and pages of history are being restored

OLAF HILLERT
G.D.R.

...on disarmament

Last December the whole world was witness to a historic event - the signing of the treaty on medium- and shorter-range missiles. Now we learn that NATO leaders are planning to replace one type of missile with another. Won't that make agreement on a 50 per cent cut in strategic weapons more difficult?

Y. ARKHIPOV
Tula Region, U.S.S.R.

...on human rights

Blood has been shed consistently on Israeli-occupied lands for many years now. Everyone knows that if it were not for the U.S. support for the aggressor, the situation in the region would certainly be different today. So my view is: the American administration talks about freedom and human rights, but when it comes to deeds, how can one believe it?

FRANÇOIS DUPONT
Bordeaux, France

EYEWITNESS ACCOUNT

The wall of lies is beginning to crumble

I agree with those Soviet people who want Soviet troops withdrawn from Afghanistan. I feel sure that this does not signify lack of support for the internationalist mission of the Soviet units in Afghanistan, as the American mass media is making out.

As a journalist I can say that the American media is spreading incorrect information. I visited Afghanistan in December

1984, with a group of journalists, mostly from the developing countries. We came to the unanimous conclusion that the Soviet troops' aim was not the annexation of the country as alleged in the U.S. It was a disinterested and good-neighbourly effort to save the country conducted on an unprecedented scale.

The wall of lies is beginning to crumble. This is largely due to the frank answers given by Mikhail Gorbachev to questions put by American newsmen. Yet right up to the present, many Americans see Afghanistan as a "Soviet Vietnam," where the Soviet Union is pursuing a policy of genocide and wants to take over the country in its own interests, while the bandits are proclaimed to be fighting a holy war for freedom....

When sensible people put forward such arguments, I reply with a simple question: "Don't you think that it is the very groups that support the contras in Nicaragua, UNITA in Angola, apartheid in South Africa, zionism in the Middle East and Pinochet in Chile, who are backing the 'valiant boys' in Afghanistan?" That usually provides me with a good position for further discussions.

I am sure that when the American people learn the truth about Afghanistan it will greatly improve relations between our countries and the unwarranted accusations and suspicion will disappear. The process of nuclear disarmament will be bound to become more dynamic. The whole world stands to gain.

JOHN WOODFORD
Ann Arbor, U.S.A.

GLASNOST

FROM OUR MAILBAG

Why not in Britain?

It was with keen interest that I read the story "In the path of Russo-Balt" by Yuri Shevchenko (New Times No. 42, 1987) on the election of the Riga minibus plant manager. The first article on the subject had already appeared in issue No. 8 of the same year.

Both articles have been of great practical interest to me - I drew upon them at a discussion of the problem of electing plant management in socialist and capitalist societies. The group which conducted the discussion comprised factory shop superintendents and managers. What they learned about the Soviet procedure for electing a plant manager was a revelation to them. Most

suggested that we in Britain should adopt a similar procedure.

I'd like to remark in this connection that perestroika and glasnost - these sudden new developments on the Soviet and, incidentally, the international political scenes - have made life more dynamic and interesting worldwide. I'm sure that the talented Soviet people will further contribute to world civilization and the system of human values.

GRAHAM HALL
Canterbury, Britain

MEMORY

The most important day

In the terrible years of nazi rule in Germany, we German Communists had the choice of

either risking our lives, or standing faint-heartedly by. We opted for the former and established an underground resistance group in Kassel. Along with Social Democrats and former trade union activists at the local tank factory, we organized acts of sabotage and tried to boost the people's morale as best as we could. The Soviet Union always inspired us with confidence in ultimate victory.

In 1943 I was drafted in to the nazi Wehrmacht and sent to the Eastern Front. I waited for my chance to desert to the Red Army, which I was prepared to do without a moment's hesitation, even at the risk of my life. I succeeded in doing so within four weeks of the nazis' abortive attempt to assume the offensive. I still recall that day - the most important in my life - with intense emotion. I hid in a dugout and was all but detected by a search party. At that moment Soviet troops mounted an attack and put our unit to flight, saving my life. Words fail to convey my joy on hearing snatches of Russian conversation from the dugout door above. I climbed out, raised my left hand to show I was unarmed, waved my right in greeting, and cried out in Russian: "Hullo, comrades! I'm a friend!" The soldiers aimed at me their submachine guns and were about to open fire. "Don't shoot, comrades!" I shouted in despair. A sergeant motioned to his men to lay off and said: "Relax, kraut, we ain't gonna shoot you." I heaved a sigh of relief.

Not everything turned out to be as simple as I had thought. "You claim to be a communist," a high-ranking officer told me. "Then how come you're here, wearing this uniform?" The question made me nervous: they might suspect me of being a nazi agent! My emotional and honest answers made the Soviet comrades believe me.

Shortly afterwards I learned that the Free Germany committee had been set up, and became the committee's official representative in a large POW camp.

A passerby: "His speech rings hollow to me"

Drawing by Igor Smirnov

FROM OUR MAILBAG

GLASNOST

I am grateful to your people for its striving to safeguard world peace.

WILLI BELZ
Kassel, F.R.G.

I am proud of my townsmen

I would like to recall some wartime events in my native town of Miusinsk: we know all about the epic World War II battles, and next to nothing about small-scale combat actions.

My town, situated in the centre of the famous Donbas, is named after the River Mius, which was a front line during the war. In 1942-43 our troops fought like hell there to liberate the Donbas and the Rostov area from the nazi occupiers. Fighting along that unexciting-looking river lasted nearly a year, and we were under special orders not to retreat beyond the Mius. The distinguished title of Hero of the Soviet Union was conferred on twenty-two of my fellow townsmen who had seen action there. I'm justly proud of them!

V. SKRYPNIK
Miusinsk, U.S.S.R.





**VADIM
ZAGLADIN,**
First
Deputy
Head of the
International
Department,
CPSU Central
Committee

"Dialogue" has become a key word in the modern political lexicon. Its meaning has now assumed a new dimension. Today dialogue is the antithesis of confrontation, hostility and tension. It means either a constructive approach to an undertaking, or even the undertaking itself. A joint undertaking, that is. Dialogue is proceeding on all the floors of the edifice of the world community. I should like to call the reader's attention to three recent events, three meetings on the party and political floors of this edifice.

Finnish Social Democrats, Hungarian communists and Italian Socialists have come out with an initiative aimed at achieving greater cooperation between non-nuclear states to promote European disarmament. Belgian (Flemish) Socialists, Bulgarian Communists, Danish Social Democrats, the Socialist Unity Party of Germany, the Labour Party of the Netherlands and Hungarian Communists have held their third working meeting. "Security can be strengthened by means of a qualitatively new policy, not qualitatively new weapons," they said. Finally, the working group of the Polish United Workers' Party and the Socialist Unity Party of Germany have issued a joint statement on confidence-building and security-promoting measures in Europe.

The content of these three documents merits expert attention - to my mind, they abound in interesting and fruitful ideas consonant with new thinking. All these ideas are products of cooperation between the parties representing the two principal trends of the working-class movement. The new potential of this cooperation, vividly

demonstrated at the Meeting of Representatives of Parties and Movements held in Moscow on November 4-5, 1987, continues to grow. It hasn't been realized to the full yet, but a start has been made - and this is the most important thing.



**GORE
VIDAL,**
American
writer

I regard Mikhail Gorbachev's statement on the withdrawal of Soviet troops from Afghanistan as the highlight of the recent period. The settlement of the Afghan problem, and other moves aimed at defusing the international situation, will demonstrate the sincerity and seriousness of the U.S.S.R.'s intentions for all the world to see. Your domestic life is now undergoing a catharsis, and you may become today the main cathalyt for the purification of the planet. Naturally, this is possible given support on the part of the U.S. and other countries of the world community (the U.S. above all). Today the U.S.S.R. confronts many internal problems which demand solution if your country's economy and public life are to acquire a new quality. The process of change must go steadily - its slowdown could relegate you to the position of a third-rate country.

The situation in the United States is becoming increasingly depressing: our elections are a stupid political game. I stick to the view that if the Soviet Union and the U.S. concentrate on their domestic problems only to the exclusion of all others, they'll risk losing a great deal of their current impact on world affairs.

British diplomat comments on New Times interview

The third meeting of representatives of the states participating in the Conference on Security and Cooperation in Europe continues in Vienna. Addressing a plenary session, Laurence O'Keeffe, head of the British delegation, said in part:

"Many delegations, I feel sure, Mr Chairman, read Deputy Foreign Minister Adamishin's replies to questions from

a correspondent of New Times recently with more than usual interest.

"To be sure, he made several points with which we would not agree. This is hardly surprising given the long history of mutual antagonisms between countries with different social and political systems, all, however, signatories of the Final Act. "Nonetheless it would be

a grudging spirit indeed who would deny that Minister Adamishin spoke with the voice of tolerance and moderation on humanitarian issues. Minister Adamishin spoke in a way which could do much to calm the anxieties of those beginning to feel that new thinking in the Soviet Union was now beginning to falter, if not peter out altogether."

RESONANCE
NT

Reform is here to stay

VLADIMIR MATVEYEV

Each successive day in February brought many more letters than its predecessor. At the morning editorial meeting on February 16 it was announced that 18 hundred letters had been received that day. This was a record. And almost every letter contained some idea or proposal on burning educational problems. The schoolteacher has truly become the paper's principal correspondent and he was impatient to state what had not yet, he believed, been mentioned in his newspaper.

The number of phone calls and visits to the paper also increased. People insisted on their comments being published "before the CC Plenum" at any cost, so that their views would be heard and taken into account. The phone calls that came in towards the evening of Wednesday and Thursday were particularly moving; they came from Moscow, Kiev and other towns. The inevitable question was: the issue carrying the Plenum documents is going to press - what do they say about the merging of different departments, democratization, polytechnical education, the concept of universal secondary education and so on?

Today all of us - teachers and Academicians, engineers and workers, ministers and schoolchildren (yes, schoolchildren, the senior ones at least) - are carefully reading the documents of the Party Plenum held in Moscow on February 17-18, and trying to absorb the ideas it raised.

Shift of emphasis

I believe those who are accustomed to orders being handed down to them from above on what to do and how to do it, without any room for manoeuvre, are feeling somewhat at a loss. An unequivocal order makes it unnecessary to use your head and relieves you of all responsibility. The method of running schools by orders and directives issued by the education ministries has inflicted

considerable damage. A single order for all and for every corner of the country, in the sphere where children and adults come together and mix, where minds meet. Today an end should at last be put to this anachronism.

The Plenum did not provide ready-made solutions to the concrete problems of the renovation of the education system. As Mikhail Gorbachev put it in his speech: "Let the decisions of our Plenum be the Party's political recommendations for teachers." They provide a strong stimulus for all who sincerely seek to extricate themselves from the web of stagnation both inside the schools, and in the system of running them, and wish to overcome aggressive conservatism and build up an education system worthy of socialism.

Ahead of us lies a big job, perhaps even bigger and more difficult than in the past. It is time to get rid of the organizational meekness and slowness in reorganizing the schools which, given the cover of "correct speeches," seemed almost like the highest state wisdom, to shake the bureaucratic-conservative syndrome from our education system.

The schools are directly linked with the future of socialism. This conclusion of the plenum today takes on a new significance,

A lesson conducted by the headmaster of the Sakhnovka village school, Alexander Zakharenko, People's Teacher of the U.S.S.R. and deputy of the U.S.S.R. Supreme Soviet.

acquiring a much deeper and fuller meaning than in the past. The ideological basis for the perestroika now under way in the country given in Mikhail Gorbachev's speech offers a better understanding of its historic meaning and the role it is playing in shaping our destiny.

History is offering all of us today unlimited opportunities to restore the Leninist image to socialism, remove all distortions and raise society to a new and higher level.

It is abundantly clear that stagnation does not merely mean a halt in development, but that it inevitably brings regress and deterioration. Revolutionary renewal releases man's best, most creative forces, and leads to a flourishing cultural and material life, human dignity and the triumph of humanism.

Speaking for myself, and probably for many others, I find the main outcome of the Plenum, the one most to be prized, is that it provides a new dimension to the professional mentality, one that is rooted in a sense of personal social responsibility.

The choice is ours

My generation had the luck in its youth to breathe the fresh air of the thaw that followed the 20th CPSU Congress. It was a time of many hopes. Unfortunately, few were realized. I know that many people for a long time afterwards had a sense of frustration, of unused opportunities. People worked, persuaded themselves that they were doing all they could for society (you can't be superhuman), but they couldn't escape the feeling that life wasn't really full or all that it should be. It was a feeling that seared your soul.

The first conscious step in the restructuring (in practice this means moving from a life you have come to accept *faute de mieux* to an open struggle against circumstances that are unaccep-



The author is editor-in-chief of the teachers' newspaper *Uchitelskaya Gazeta*.

table) makes you feel entirely different about your usefulness, your commitment to the country's main task - revolutionary renewal.

Some find it easier to make this first step, for others it is much more difficult, while for others again, it requires genuine courage of the highest order. We know of such examples from press reports from Odessa, Central Asia and Armenia. But these moral ordeals also produce the will, passion and desire to carry perestroika through.

Life is one long struggle. Today that is no exaggeration, but a statement of fact. Real life today implies a struggle. This is not the first time the Party has focussed attention on the problems of the ideological basis for the revolutionary changes in our economy and cultural life. They were raised in the Political Report of the CC CPSU to the 27th Congress, in the new edition of the Party programme, and in the documents of the post-congress plenums, and summed up during the celebrations of the 70th anniversary of the October Revolution.

But now we have reached a new stage, probably the most decisive stage of perestroika. It affects the vital interests of millions of people, society as a whole and each member individually. No one can avoid making his choice. The wish to sit quietly and keep out of the whirlwind of our times is also a choice, though the least honorable one. So it is not surprising that more and more people want to come to a better understanding of the essence and purpose of what is happening in the country today and actually do something rather than remain mere onlookers.

In teaching circles, the February Plenum had been eagerly looked forward to, and it cannot fail to cause deep satisfaction. The most urgent problems of a radical reform of public education were considered in the wide context of perestroika. And the teachers' voices were heeded. Everything that teachers at vocational schools, college lecturers, nursery school staff and instructors in extracurricular activities wrote about to *Uchitelskaya Gazeta* and which had made up the bulk of its publications was directly reflected in the report to the Plenum.

Time

for bold

decisions

The time has come not for cosmetic changes, improvements, corrections, or

minor adjustments. The time has come for radical changes.

We can no longer afford to postpone developing a scientific concept of universal secondary education as the foundation for subsequent training in all fields. It is also necessary to start the large-scale technical re-equipment of secondary, vocational and higher educational establishments, with a view to their becoming partially self-financing in the future.

Other urgent tasks are the elimination of departmental barriers, the involvement of the public through the democratic mechanism in the school reform, the rejection of administrative-command methods, increased independence and responsibility for school and college collectives, with the transfer of the maximum powers to them, as well as to local Soviets and local education bodies.

It is also time to make radical changes in the training and retraining of teachers and the reorganization of pedagogical science itself, in order to gear it to the real tasks of renovating secondary and higher education.

The Plenum reaffirmed that the basic principles of the Soviet education system remain unchanged: it is a **universal, labour and polytechnical system**, but its Leninist essence has to be restored.

The Plenum upheld the idea of mutual respect and cooperation between teachers and students designed to oust the present administrative atmosphere and rigid attitudes and drill.

The door has been flung wide open for creative and innovative work. To quote from the speech by Egor Ligachev, "We must encourage in every way, not nip in the bud, schools whose image is determined by talented and dedicated teachers with original ideas. We should create different types of school, boarding schools and children's homes, educational complexes for preschool, school and extracurricular activities, all linked by a common aim and guaranteeing encouragement for the creative abilities of children and young people. That is our task of tasks."

The idea of organizing a creative Teachers' Union was supported, as was that of setting up public councils of educational bodies and elected education councils.

It is hard in one magazine article to summarize all the ideas, approaches and recommendations on public education put forward at the Plenum. But it is important to note that they were all directed at

ensuring **more socialism, more democracy** in the education system. One comes to understand more clearly and fully that our education system - general education and vocational schools, secondary and higher education schools - should produce educated citizens, committed and loyal to socialism. At the same time, graduates should be questing people, capable of living and working in democratic conditions, in work collectives with economic independence, in an atmosphere of mounting economic and social responsibility for themselves and their country. Without such an influx perestroika cannot win through.

Today everyone can see that this is not merely wishful thinking. The social mandate issued by society is reinforced by a revolutionizing programme for the all-round renovation of the education system.

The prospect is indeed inspiring, and these are not empty words. But one should add that no programmes, even the most radical, can be implemented by waving a magic wand. That has never happened and never will.

A war on

conservatism

It should not be forgotten that the unsatisfactory rate and depth of educational reforms were not the result solely of inertia, partial incompetence and stagnating conservatism in the education system.

They were also the result of the bitter and stubborn resistance to anything new put up by all those who are concerned only with their personal or group self-interest. Their opposition is strong, and it should not be thought that it will weaken or disappear on its own.

The hidden opponents of perestroika are also gaining experience in launching attacks and holding fast. Tomorrow too they will seek to brand creative teachers as pseudo-innovators, nor have they given up their attempts to get rid of those who are already well known. They will continue to try to alarm us with allegations that the principles of socialism are being abandoned, when in reality the ideals of the new system are being stripped of dogmatism. They will continue to distort, deform and defame.

So does a struggle lie ahead?

Yes, a struggle against narrow-mindedness, bigotry, conservatism. But it is clear to the majority of the teaching profession in the country, to the majority of the people, that there is no alternative, that the aims of renewal are real, and that they are here to stay.

WHERE THREE CONTINENTS MEET

The Mediterranean, or the Great Sea of Sunset, as it was known in antiquity, takes pride of place in the history of civilization.

Its shores have known the rise and fall of mighty slave-owning and feudal empires, kingdoms and caliphates, as well as the blossoming and decline of arts and handicrafts, entire cultures and schools of scholarship. It has been throughout the ages a meeting place of East and West, an arena of conflicting religions, a crossroads of world trade. Armadas of fighting ships furrowed its waves from one wonder of the world to another - from the Pillars of Hercules in the Strait of Gibraltar to the legendary Pharos lighthouse of Alexandria. The storms and gales generated in its depths have swept oceans and continents.

Reflected in the blue mirror of its area of upwards of two and a half million square kilometres are archipelagos and islands, mountain peaks and sandy beaches, olive and laurel groves, forests of cedar and plantations of oranges and lemons, major ports and tiny fishing villages, modern luxury villas and the ruins of ancient temples.

Located on its littoral today are 18 states with a total population of upwards of 350 million, countries with varying levels of development in their economies and productive forces, here monarchies rub shoulders with republics, socialist states with capitalist ones, and non-aligned countries with NATO members. They are divided by no small number of acute contradictions and territorial claims, the burden of old slights and new suspicions. Only the waters of the Mediterranean bring them together.

The concept of a permanent "Mediterranean crisis" is enshrined in the annals of diplomacy. This warm sea has long been one of the earth's most explosive hotspots. A far from complete list of the sources of tension here include the fires of the Middle East, the long-standing Cyprus problem, the drama of the Lebanon, the Graeco-Turkish conflict, and the periodic deterioration of the situation around Libya. We might also add the adverse effect of the unending and senseless Iran-Iraq war.

The active and growing U.S. naval presence bears the prime responsibility for the region's transformation into an arena of perilous confrontation. The U.S. Sixth Fleet feels so much at home here that it dispatches its ships on far from innocuous Black Sea cruises to the shores of the Crimea.

The Soviet Union has long proposed concerted measures of confidence for the area, a reduction in the armed forces there, the removal of nuclear weapon carriers, an end to the deployment of nuclear weapons in non-nuclear Mediterranean

countries, as well as the elimination of foreign military bases.

The qualitatively new situation that has developed in various fields of international relations since the signing of the Soviet-American INF treaty in Washington opens up real possibilities of extending the positive processes now making headway in Europe to the Mediterranean.

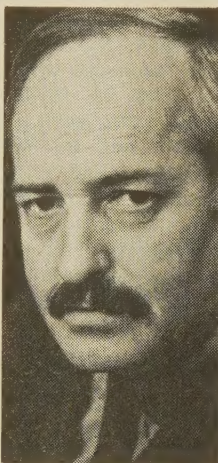
In a recent appeal to the governments of the Mediterranean countries in the non-aligned movement, Soviet Foreign Minister Eduard Shevardnadze reaffirmed the U.S.S.R.'s preparedness to assume the commitment, provided the U.S. does likewise, not to build up nuclear arsenals in the Mediterranean and to refrain from expanding its naval forces there. He particularly emphasized the danger of the schemes NATO is devising to "compensate" by augmenting other types of arms, especially sea- and air-based weapons, inasmuch as these plans conflict with the overall psychological mood internationally and escalate the already high level of militarization in the Mediterranean.

The Mediterranean countries themselves are displaying an increasing measure of responsibility in the effort to overcome their differences. This is illustrated by the recent meeting in the Swiss resort of Davos between Andreas Papandreou and Turgut Özal, the Prime Ministers of Greece and Turkey. It was the first time for ten years that the leaders of the two countries had entered into a dialogue. They agreed to annual meetings of the kind and to a hot line between their respective residences. A conference of experts on Graeco-Turkish relations has ended in Istanbul. The foreign ministers of the Balkan states are about to meet.

There are indeed too many outstanding issues, and not solely of a political order. Inasmuch as the Mediterranean lies at the juncture of three continents, the international organizations of the U.N. and its specialized agencies are tending increasingly frequently to coordinate joint regional programmes and projects. A seismological-tectonic chart of the region is currently being mapped under UNESCO's aegis, while a system for long-term advanced warning of volcanic eruptions is being devised.

The Mediterranean countries have before them a vast field for cooperation in economic and cultural matters as well as in transportation, tourism and efforts to attain an ecologically improved environment, as this is one of the most polluted parts of the world ocean. As the oldest crossroads for international contacts and exchanges, the Mediterranean can and must be a sea of peace, prosperity and safe navigation.

ALEXEI
BUKALOV



**For peace
and security
in the
Mediterranean**

THE WAY A KABUL MERCHANT SEES IT

Economic cooperation furthers the national reconciliation policy

Gulzad, a Kabul merchant with whom I talked in Moscow recently, is a prominent figure in the Afghan business community. At least, so I was told by representatives of Aftento and Aftorg, the Afghan-Soviet joint-stock companies set up not long ago together with Afghan private capital. I asked Gulzad what he thought of the economic relations between the two countries.

"They are like a time machine," he replied half jestingly. "Just try to imagine present-day Afghanistan without Soviet-Afghan cooperation. You'll get a picture of the country as it was a hundred years ago or more - without multi-storey blocks of flats built by the Kabul prefabricated housing plant, without most of the modern roads and mountain tunnels, without electricity, large irrigation systems and agricultural machines, without chemical fertilizers and skilled personnel. The 213 enterprises set up with Soviet assistance in different years account for 60 per cent of our country's industrial output. And this despite the fact that during the undeclared war they have been repeatedly damaged by rebel attacks.

"Of course, we also have installations built by Western countries," Gulzad said.

"The West German company Hoechst has put up a pharmaceutical plant. A shoe factory has been constructed under an Italian licence. There is a Coca Cola plant."

Kabul, Gulzad underscored, has always preferred effective Soviet assistance to the aid of any other country, especially as Soviet assistance had no political or strangulating economic strings attached. Cooperation with the Soviet Union has expanded the public sector of the Afghan economy both under the monarchy and the Daud regime, and since the April revolution.

Soviet credits for the private sector

Our economic relations have now entered a new stage, Gulzad noted with satisfaction. Moscow has begun to cooperate with the Afghan private sector. This fully accords with the policy of national reconciliation launched by the Najibullah-Keshmmand government over a year ago. Moreover, this cooperation buttresses this policy. Though the first contracts with Afghan employers were concluded only recently, some of them

have already started to yield practical results.

Capital is invested in branches where a quick return can be expected. A factory for the manufacture of bicycles, which are hard to get in Afghanistan, is now under construction in Kabul. Nine bakeries will soon be put into operation in Kabul, Kunduz and Pul-i-Khumri, and ten more in other cities.

Four privately-owned building companies have been founded in Kabul, Kunduz and Shibirghan. The following mechanism for cooperation has been worked out: Afghan employers receive credits from Soviet banks for the purchase of equipment and materials in the Soviet Union and payments for technical services rendered by Soviet organizations, such as designing and assembly.

Incidentally, last year a special law was adopted with the aim of attracting foreign investments to Afghanistan. It envisages tax concessions for foreign investors and allows them to export up to 40 per cent of their profits. Judging from reports from Kabul, businessmen in India, Japan, Hong Kong, Lebanon and Austria have shown interest in the new terms of investment.

The Soviet Union supplies Afghanistan

Pakistan and the "Afghan question"

Will 1988 bring the long-awaited peace to Afghanistan? This question is now arising, on the eve of the next round of Afghan-Pakistani talks due to resume in Geneva on March 2.

By now a package of agreements covering nearly all aspects of a settlement has already been worked out at the talks, which have been conduc-

ted through the U.N. Secretary-General's personal envoy since 1982. They include an agreement on non-interference in each other's domestic affairs; an agreement on the return of Afghan refugees from Pakistan; international guarantees of non-interference in Afghanistan's domestic affairs; a document on the interrelationship

of all elements in a political settlement, and an agreement on establishing a verification mechanism. The withdrawal of Soviet troops from Afghanistan on terms acceptable to all parties concerned remained the only outstanding question.

Seeking to facilitate a speedy and successful conclusion to the Geneva talks, the Soviet and Afghan governments have agreed to set a concrete date for the start of the withdrawal of Soviet troops - May 15, 1988 - and to complete their withdrawal within ten months. The date is based on the assumption that agreements on the settlement

are signed not later than March 15, 1988, and that, accordingly, they will all enter into force simultaneously two months after that.

Thus, the signing of the Geneva agreements would make the withdrawal of Soviet troops from Afghanistan possible within a short time, and this, in its turn, would create favourable conditions for an overall settlement of the "Afghan question."

Of course, the Afghan people are expecting precisely such a course of events, and hoping for an early peace in



Soviet experts are lending Afghans a hand in building a mechanical bakery.

with equipment of various types and manufactured goods. In the past few years, when shortages of basic foodstuffs were often felt in a number of areas because of the undeclared war, the Soviet Union came to the aid of its southern neighbour, in many cases delivering food gratis.

The principal item of Afghan export to the Soviet Union is natural gas, which is produced in the north of the country, not far from the border. The earnings from gas exports make up over a third of the country's state budget revenue. The share of the private sector in the total volume of Afghan exports to the Soviet Union is growing too, having reached 10 per cent in value terms. In the opinion of Gulzad, it should be increased further. During his visit to Moscow he concluded that in the Soviet Union there is a practically unlimited market for high-quality Afghan consumer goods.

"Astrakhan, carpets, wool and dried fruit are our traditional exports," said Said Murtaza, the economic and trade counsellor at the Afghan embassy in Moscow. "There is a great demand for

them in Europe and Southeast Asia. Afghan carpets are selling well on the Japanese market. For obviously political reasons, certain quarters in the West have adopted a discriminatory attitude towards trade with our country. Two thirds of our exports therefore go to the Soviet Union, with the capitalist states accounting for only a quarter of the total volume. We are very interested in the Soviet Union as a trading partner."

Direct links

The establishment of direct links between Soviet republics and regions and all 29 provinces of Afghanistan has become a new aspect of trade, economic and cultural cooperation between the two countries.

During a recent visit to Tajikistan I learned how the mechanism for these ties operates. Tajikistan is developing contacts with the Afghan provinces of Badakhshan, Kunduz and Takhar. This republic has very favourable conditions for personal contacts because Afghans and Tajiks have no language barrier to cope with. The affinity and even kinship of their cultures and customs also plays an important role. Moreover, Tajikistan and the above-

mentioned provinces are neighbours.

On the basis of professional interests, direct contacts have been established between several Tajik and Afghan work collectives. Thirty Afghan youths have come from Kunduz to learn the trade of tractor operator in the twinned Tajik town of Kurgan-Tyube. This was a big event in the life of that comparatively small town with its population of about 55,000. The town's people know the Afghan boys by name and have taken them under their wing. An exchange has been organized between twenty Tajik and Afghan doctors.

Barter is growing too. An Afghan-Tajik trading company, Aftaj, is being set up with headquarters in Kunduz. Under its founding charter, Tajik capital will make up 40 per cent of the total. The aim of the company is the direct exchange of goods. The Afghans hope to get increasing quantities of manufactured goods and articles of prime necessity from Tajikistan.

Gas produced in the north of Afghanistan is delivered through pipelines directly to Tajikistan. Nikolai Vorotyntsev, chief engineer at the central control system at the U.S.S.R. Ministry of the Gas Industry, told me that every other day the republic "lives" on gas supplied from Afghanistan. The Afghan party has also benefited from the deal. A power transmission line has been constructed from Tajikistan to Kunduz.

Cargoes are now arriving in different Afghan provinces from their twinned regions. Most often they take the form of free aid to the Afghan population suffering from hostilities.

The flow of goods across the Soviet-Afghan border is increasing. The transport authorities should give the green light to them, and better protection should be ensured on the roads of Afghanistan so that the cargoes reach their destination.

ENVER AKHMEDZYANOV

their country, torn as it is by the protracted fratricidal war.

For many years the process of a political settlement at the Kabul-sponsored talks in Geneva has been developing very slowly because of the inconsistent stand adopted by Islamabad. The Pakistani leadership has constantly experienced pressure from forces opposed to a positive settlement in Afghanistan.

It is no accident that every time the negotiating parties came close to elaborating mutually acceptable agreements, Pakistan either put forward new

terms or went back on what it had agreed earlier.

At this crucial moment, when the road to a successful conclusion to the Afghan-Pakistani dialogue in Geneva seems to have been opened up, Islamabad has made statements which can only be assessed as attempts to put more obstacles in the way of a settlement. It is now insisting on the formation of a transitional government in Kabul as a pre-condition for the signing of the Geneva agreements. How is this new inconsistency to be explained? Over the past six years Islamabad has been conducting talks

with the present Afghan government. The formation of a national government is an internal Afghan issue in no way related to the Geneva process.

In the course of preparations for the next round of the Geneva talks, the U.N. Secretary-General's personal envoy Diego Cordovez held a series of consultations in Kabul and Islamabad. He declared that Kabul had expressed its readiness to demonstrate flexibility and the desire to reach understanding at the talks. Is Islamabad also prepared to display political will and flexibility in Geneva?

One does not choose one's neighbours, one has to establish good relations with them, goes an oriental saying. A truly golden rule of a good-neighbourly relations! It fully accords with the principles of international relations proclaimed by the United Nations.

Adhering to and implementing these principles in actions, not words, would be a worthy contribution by Islamabad to the settlement of the "Afghan question."

VLADILEN

BAIKOV

CARRYING ON

As expected, Mauno Koivisto has won the presidential election

After voting returns had been announced, the candidates met journalists at a press conference. "I had hoped for somewhat better results, but I was prepared for such an outcome as well," Mauno Koivisto said frankly. "Voters received two ballot papers each, and this seems to have created some confusion. I doubt if I'll run for President in 1994."

In fact, President Koivisto, who was nominated in 1982 by a conglomerate of political forces led by the Social Democrats, took 47.9 per cent of the vote, 2.1 per cent short of the poll needed for direct election in the first round, and exactly the same number of ballot papers proved to have been spoiled.

Many believe the new, unwarrantably complicated system of voting to be the cause of this confusion. In the past, the Finns voted for 301 representatives who elected the President, and today they also have to vote directly for the presidential candidate of their choice. This novelty put many of them in a difficult position, and a second round, therefore, had to be held. Mauno Koivisto received the votes of 189 electors.

Paavo Väyrynen, chairman of the Centre

Party, picked up 20.1 per cent, and Premier Harri Holkeri of the National Coalition Party, 18.1 per cent of the vote. Kalevi Kivistö and Jouko Kajanoja, candidates of the left, who were unable to form a single bloc in the present situation, obtained 10.4 and 1.4 per cent, respectively.

Väyrynen seemed more pleased than the others. "I believe that in view of the voting results the government should resign so that changes can be made in its composition," he stressed. I was told by a politician close to Väyrynen that, setting his sights on winning the presidency in 1994, the chairman of the Centre Party would like to benefit from the present distribution of votes and include members of his party in the cabinet.

But the Centre Party's chances of getting ministerial posts are not good. The parties that make up the government coalition won a total of two thirds of the vote in the presidential election, and this enables the cabinet to stay on, though some changes are not to be excluded. The editor of a national newspaper, who knows the current premier well, expressed confidence in a talk with this correspondent that Holkeri will retain office and try to use it as a springboard for broader participation by the National Coalition Party in the administration of the state, and to strengthen his position for the next presidential election in 1994.

Finland has the third highest rate of economic growth in the capitalist world.

These successes are mainly due to the traditional policy of consensus on acute problems, which helps avoid conflict on political and economic issues. This policy has evidently reached its highest point, or "superconsensus," with the formation of a "red-blue" cabinet which, in addition to the political centre, includes centre-left and centre-right forces. A paradoxical consequence of this "superconsensus" is the unity of the Social Democrats and the coalition in their views on restructuring the national economy.

On the initiative of the Finnish Social Democratic Party, the government is

planning to expand social rights for working people, as for instance, in the management of enterprises. On the other hand, the National Coalition Party is proposing tax and administrative measures to enhance the flexible operation of the private sector. There is still no clear picture with regard to a future government package.

The most radical elements believe that an attempt to combine the incompatible may deal a mortal blow to the traditions of consensus. True, far from everyone regards this possibility as an evil; feelings in favour of further integration into the West European system of values are growing in the country, especially in the business community.

Further integration means that unprofitable plants will be closed down, agricultural export subsidies abolished, and "moderate" unemployment permitted. Simultaneously, Finnish businessmen are intensifying cooperation with the European Free Trade Association and the European Economic Community, and striving to consolidate their position on Western markets, which already consume 80 per cent of the country's exports.

The government and the President will have to find ways of overcoming the difficulties experienced by Soviet-Finnish trade over the past few years. Due to the fall in oil prices, Soviet export revenues have dropped, thereby restricting the volume of imports from Finland.

The prevailing opinion is that the existing mechanism for clearing trade should be used as a way out by introducing new forms of settlement, and expanding the volume and range of purchases of Soviet goods instead of restricting Finnish deliveries to the Soviet Union.

Problems of international security cropped up only sporadically in the course of the election campaign and discussions of the government's policy, though, the development of the situation in NATO, the growing activity of the Western European Union, and the influence of U.S. naval strategy on Northern Europe call for a deep analysis.

It is to be supposed that many of the Finns who voted for Koivisto wanted to ensure the continuity of the government's domestic and foreign policies. Having secured a mandate from the public, the President is not going to alter his course.

ALEXANDER POLYUKHOV,
our own correspondent

Helsinki





"I must say I very much liked addressing meetings far from big cities - in the countryside where you feel popular wisdom and the purity of criteria. In the countryside people think in more down-to-earth, understandable and everyday terms. At the same time, wherever I went, voters raised the problems of refugees, a federative state system, and the withdrawal of foreign troops - in short, the main problems of a Cyprus settlement."

"How, in your opinion, can the deadlock in the settlement of the Cyprus problem be resolved?"

"That is a difficult question and deserves a difficult answer. For we must have the following objective: if Cypriots are going to end the deadlock, they must emerge as a united nation. Unity is not merely a slogan, but a necessary condition. No one will ever trust us if we do not unite here on the island. Talks between the two communities should be resumed. We should be consistent and ready for compromise, and act firmly, undogmatically and flexibly. We must secure the withdrawal of troops and rapprochement between the communities."

"I think a very favourable political situation is now taking shape internationally. For instance, I warmly support the new climate and the new spirit being created today in relations between the Soviet Union and the United States. They remind me of the time when the snow thaws and the grass begins to shoot in the sun's rays. All this will certainly influence different regions of the world, including the Mediterranean, and the situation on our island."

Our conversation was drawing to an end. There was something almost palpable in the air that seemed to dispose us to a leisurely talk. Pictures and lithographs hung on the walls, along with photographs of Vasiliou's children. The host was delighted to introduce them to us: Phofos is a student, Everton is a schoolboy, and Vaso too is at secondary school.

"Today there isn't a photograph of my wife Androulla here," our host said with a smile. "But it would be unfair not to mention her. Androulla Georgiadou is a lawyer and an expert in the history of international relations. She consults various organizations and firms and devotes much time to the work of the World Federation of U.S. Associations."

We wished Georgios Vasiliou every success in his work.

VITALY IGNATENKO
our special correspondent

Nicosia

SEARCHING FOR NEW SOLUTIONS

Georgios Vasiliou has been elected President of the Republic of Cyprus

For some time Georgios Vasiliou will continue to work in his office far from the centre of Nicosia, in the modern, very comfortable, though not quite new building that houses the Middle East Marketing Research Bureau.

Georgios Vasiliou founded the bureau 20-odd years ago. Over this period he and his assistants have been able to turn it into the largest and most authoritative economic research centre in the Mediterranean.

Today the bureau has representatives in dozens of countries in the region, both in Africa and the Middle East. It analyzes economic information and marketing, consults firms on computerization, and trains experts in electronic computers.

Georgios Vasiliou is energetic, benevolent and democratic. You feel that immediately you meet him. It is also plain that his assistants resemble their chief - they are businesslike, correct, affable and optimistic.

"I have been a reader of New Times since 1953," Georgios Vasiliou said with a smile. "But my family knew it even earlier, as my parents lived in Chirchik in Uzbekistan. If I had enough time, I would gladly contribute to it as an economist."

"Take Cyprus, for instance. It is faced with complex and challenging economic problems. I am sure that politics is a derivative of economics. One cannot go in for politics alone, especially in our region."

The windows of his semi-circular office offer a panoramic view. One can literally see the problem of Cyprus spread out

before one: the dividing line, the empty U.N. zone, and the symbols of Turkey cut into the neighbouring mountain.

We spoke sometimes in Greek, sometimes in English, but even when Soviet ambassador Yuri Fokin and I said something in Russian, Vasiliou nodded to show that he understood.

Georgios Vasiliou was born in Famagusta, Cyprus, on May 20, 1931. His father Vassos took part in the Greek civil war of 1946-49. Then the Vasiliou family went to the Soviet Union as political exiles. The wonderful doctors - optician Vassos and stomatologist Phofos Vasiliou - are still remembered in Chirchik city hospital.

At the time their son tried to follow in his parents' footsteps: he took a 12-month course of studies at the universities of Vienna and Geneva. However, he decided instead to take up economics. In 1951 he enrolled at Budapest University, where he defended his candidate's thesis on the subject "State Capitalism." Vasiliou has a Ph.D. in economics from the University of London.

"Today the people of our republic are concerned with economic issues and social policy," Georgios Vasiliou went on to say. "This does not mean that they have reconciled themselves to the partition of the country, which is of course our gravest problem. But, I repeat, great attention should be paid to the economic situation on the island."

"All the same, what was the main question raised by voters?"

NUCLEAR TESTS STILL ON

The second round of full-scale Soviet-U.S. talks on nuclear testing opened at Geneva on February 15. Lieutenant General Sergei Zelentsov, deputy head of the Soviet delegation, kindly granted our correspondent an interview on the eve of their departure.

It was reported in January that the members of both delegations, including yourself, had toured the Soviet nuclear testing ground near Semipalatinsk and the American proving ground in the state of Nevada. What was the reason for these mutual visits?

I would above all like to recall that in 1974 the U.S.A. and the U.S.S.R. signed the Treaty on the Limitation of Underground Nuclear Weapon Tests, and in 1976, the Treaty on Underground Nuclear Explosions for Peaceful Purposes. Both these documents could serve as a sound basis for further efforts to lower the threshold for yields and the number of nuclear tests until a full ban is imposed.

It should be mentioned that these treaties have not yet been ratified through the fault of the U.S. I can't agree with the Americans that the main obstacle here was the difficulty of ensuring effective control over the observance of these treaties. After all, there were adequate facilities for this.

To work out effective control measures, it was proposed, during the first round of the talks, to conduct a joint experiment. U.S. control equipment was to be installed at the Soviet testing ground and Soviet equipment in the United States. A nuclear device of a predetermined yield was to be exploded in each country to verify the accuracy of the readings.

Before the equipment could be installed, the experts had to know the conditions of work in preparation for an explosion, the geological conditions and many other factors. The purpose of the trips to the proving grounds in Nevada and the Semipalatinsk area was to obtain the information required.

It appears that you are an expert not only on preparations for and the execution of nuclear tests, but also on methods for

measuring the yields of nuclear explosions. Are they different in our two countries?

Both the United States and the U.S.S.R. have worked simultaneously, though independently, on methods for measuring the yields of nuclear explosions. There has been no cooperation, nor can there be any, in this sensitive field, because a country's defence capacity may depend on it. However, the methods of both countries proved to be similar, because they are based on the same physical principle. Both use the hydrodynamic method for measuring the yields of nuclear explosions.

I would like to explain that when a nuclear explosion takes place underground it produces a powerful shock wave in the rock around the epicentre. At that moment solid rock behaves like liquid. The term denoting the method is derived herefrom. The higher the yield the higher the shock velocity. By registering the shock wave at definite points on the globe it is possible to establish its velocity. As I have pointed out, the shock velocity is dependent on the yield. It is true that such measurements can be made in the immediate proximity of a nuclear explosion, i.e., in the hydrodynamic zone.

And how are these measurements made?

Let us take the American CORTEX system. First a hole is drilled in the ground for the nuclear device. Then in the hydrodynamic zone another hole is drilled parallel to the first. A specially equipped sensor cable is then fed into the second hole.

The shock wave resulting from the explosion destroys or short-circuits one section of the cable after another. During the actual explosion and propagation of the shock wave the cable is sounded with pulses. The pulses sent back from the destroyed or short-circuited sections of the cable are picked up with the help of special instruments. The information obtained is then processed to determine the yield of the explosion.

The preparations for such an experiment are elaborate and labour-consuming. To test a 150-kiloton device it is necessary to sink it in a hole about 600 metres deep to prevent any radioactive discharge into the atmosphere.

What factors affect the accuracy of the measurements?

There are many, such as the physical

properties of the rock in the zone of the test, the position of the nuclear device, its shell, the degree of accuracy of the measurement of the distance from the tip of the sensor cable to the nuclear device, and the quality of the equipment and drilling techniques. Aware of these factors, the Americans showed caution in saying that the margin of error of the CORTEX system was about plus-minus 30 per cent. At our proving ground, where the physical properties of the rock have been carefully established, we get more accurate measurements of the yields.

What procedure has been adopted for the joint experiment in verifying the control facilities?

The Americans will instal their CORTEX system at our proving ground and we will instal ours in Nevada. Each side will carry out one explosion. The visiting experts will register the explosion with their instruments and measure its yield.

Will the experts of the host country make measurements too?

Certainly. The experiment should produce two pairs of identical findings. Ideally, the measurements of each explosion should coincide.

And if they don't?

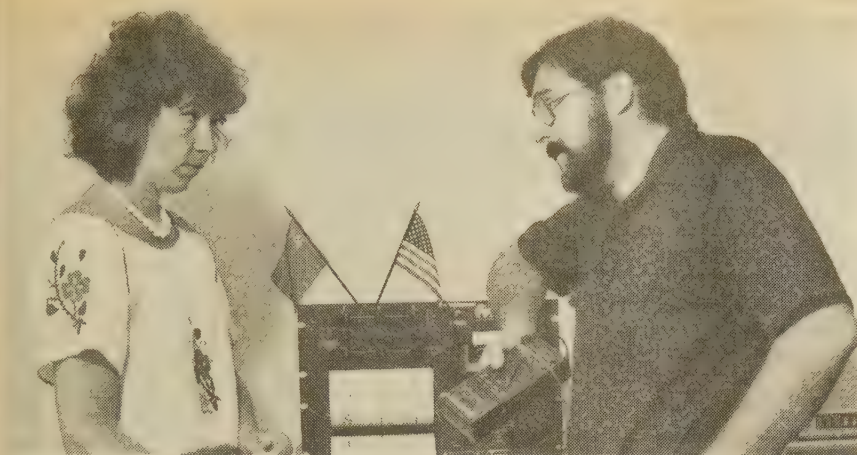
We will have to find out why. At the current stage, our task is to find an optimal method of effecting control over the observance of the treaties signed in 1974 and 1976.

Have any other methods been devised for measuring the yields of nuclear explosions?

There are other methods, for instance, that of long-range seismism. After the shock wave has covered a certain distance, it develops, as we say, seismic vibrations which propagate to areas thousands of kilometres from the nuclear explosion.

These seismic waves can be picked up, and they may help pinpoint the explosion and determine its yield. The techniques are similar to those used to register earthquakes and measure their force.

This method is simpler, and more economical. In addition, it is possible to enlist the entire world community to check the test. There are seismic stations in practically every country. They are already registering the force of seismic waves generated by nuclear explosions, and have been publishing their findings in open bulletins. I take the liberty of saying



David Chaves of the Nevada University and Lyudmila Zhokina, a senior engineer of the Institute of Physics of the Earth under the U.S.S.R. Academy of Sciences, processing the data obtained at the Semipalatinsk nuclear test site.

that the basis for an international organization for monitoring nuclear tests has already taken shape. And its method is that of long-range seismism.

To improve the effectiveness of international control over nuclear explosion yields, it will be necessary to calibrate the nuclear testing grounds. We will do this in the course of the joint experiment we are conducting.

Don't you think that it will probably be some time before nuclear test yields are placed under international control?

I disagree. If we ensure control over the observance of the treaties concluded in 1974 and 1976, we will be able to start negotiations on lowering the nuclear threshold. Our American colleagues have said that this limit will adversely affect the CORTEX system, which is designed for the present test threshold.

Therefore, in addition to the hydrodynamic method, we intend to test the effectiveness of seismic control. We need a store of accumulated scientific knowledge to be able to effect control over a lower nuclear threshold.

Are there any other methods for control over nuclear explosion yields? For instance, from outer space?

Quite a few that I know of. You can monitor the observance of the nuclear threshold from space, but this technique can be employed only as an auxiliary one. Science has discovered a whole range of phenomena caused by trinitrotoluene explosions, not to speak of nuclear tests. Any disturbance of the Earth's surface gives rise to atmospheric disturbances in the form of various vibrations. By registering these vibrations it is possible to determine yields with adequate

accuracy. However, only the hydrodynamic and seismic methods are of practical importance to us. As I see it, the role of the seismic method will increase as the nuclear threshold becomes lower until all nuclear tests are banned.

Why does everybody speak of 150 kilotons? Where did this figure come from? Why not 200 or, say, 100 kilotons?

This figure is conditional, of course, though not a random one. When the treaty was drafted in 1974, strategic charges had a yield of 150 kilotons or even more. The authors of the treaty sought to limit their growth. But military science took another turn: MIRVed ICBMs (i.e., ICBMs equipped with multiple independently targetable re-entry vehicles) were developed. Though the charge each carried was smaller, they were characterized by higher accuracy.

If the nuclear threshold is gradually lowered, would not nuclear tests ultimately become pointless from the military point of view? For instance, if the threshold is lowered to one kiloton?

Never, under any circumstances. One kiloton is equal to a thousand tons of trinitrotoluene. That is a mountain of explosives. You don't need much propellant to launch such a warhead, which can be used for military purposes.

We, therefore, regard this threshold only as a stage on the way to the complete banning of all nuclear tests and ultimately to the elimination of nuclear weapons. Ending nuclear tests will prevent the further refinement of nuclear weapons.

In their statements, spokesmen for the U.S. administration said it would be possible to conduct secret nuclear tests. The American press has also repeatedly raised this point. They say there are two ways of doing this, one being to carry out an explosion in a big hollow, and the other to do so in a seismically active region during an earthquake. What are the prospects for such tests?

Though in theory such tests are possible, they are difficult to carry out in practice. To "muffle" the blast of a 100-150 kiloton charge to an eighth or a tenth of its force, it would be necessary to hollow out a cavity with a radius of

100 metres at a depth of 600 metres. It would be impossible to conceal a project of this size from modern space monitors. The wave produced by such an explosion would spread anyway, though the control instruments would register a lower yield. In such conditions it would be possible to perform a low-yield explosion without detection. But space monitors would register engineering works at the proving ground in any case. What would then be the point of conducting such a test?

We want the side carrying out control to have exhaustive information on the conditions in which the test is being conducted. That is precisely why we are visiting each other's proving grounds. Confidence-building measures and control complement one another.

As to the possibility of "disguising" a test as an earthquake, you would have to know exactly when it was to occur and where the epicentre would be. It would be necessary to dig a pit and a tunnel well in advance of the date. In addition, you would have to execute a large volume of construction work and deploy the equipment. The main thing would be to synchronize the nuclear explosion with the seismic shock. And this would be virtually impossible. Even if all the above conditions were observed, there would be no guarantee that the seismic stations would fail to register the explosion.

And if anything went wrong, there would be bound to be an international scandal, and any country that attempted anything of the kind would suffer permanent disgrace.

One last question, if I may. You are a career army officer, a general, and you have kindly granted me an interview in your office on the premises of the U.S.S.R. Ministry for Defence. Our main subject is disarmament. Do you see any paradox in this?

This is not a paradox, but two sides of the same coin. As a career officer I am eager reliably to defend my country's peaceful efforts. One way to ensure this is to develop the most advanced weapons, including nuclear arms. The other way is nuclear disarmament and the reduction of conventional armaments to levels of reasonable sufficiency. This will guarantee security not only to my fellow countrymen, but also to people in other countries. As you see, the end is essentially the same, though the means are different. But nuclear blackmail is becoming obsolete. The new thinking is winning more and more supporters. My colleagues and I are therefore putting our hearts into this new job. We want to bring the second round of the talks to a satisfactory outcome.

Interviewer
EVGENY ANDRIANOV

In the debt noose

The Latin American countries have the dubious distinction of owing more than any other group of developing nations. They have been trying hard to find a way out of the debt crisis.

VLADISLAV CHIRKOV

Every newborn baby in Latin America owes already 1,000 dollars. The external debt of the capitalist nations of the region stands at a staggering 400 billion dollars, which means 1,000 dollars per capita of the population including the elderly and children.

At the end of 1987, Brazil, Mexico, and Argentina topped the list and owed 114.5, 105 and 49.4 billion dollars, respectively. The developing nations in general owed their Western creditors a total of 1 trillion 190 billion dollars last year and the noose around their necks is growing tighter. According to the World Bank their debt will have reached 1 trillion 245 billion before the year's end.

Short of attempting to discuss the problem in all of its many aspects in this brief analysis, or compete with the most detailed and comprehensive studies of it undertaken throughout the world, I'll confine myself to some sketchy remarks on this most painful problem for debtors and creditors alike.

The staggering debt has arisen from a whole range of internal and external factors, among them the imperfections of economic structures and models of development, the thoughtless squandering of credits, the drain of local capital abroad, and the flawed fiscal and economic policies of dictatorial regimes. Significantly, the debts of Brazil and Argentina increased dramatically while the two countries were ruled by military juntas.

Increasing economic efficiency is a sure way of reducing one's reliance on credits.

The military regimes in Latin America are so badly in debt because their uniformed rulers are no economists. Having been educated in goose-stepping rather than statistics they are concerned above all to justify their own existence rather than ensure economic growth. They maintain armies whose strength is out of all proportion to the defence needs of the

nations concerned. Most Latin American countries have no enemies. The Pinochet regime in Chile, for instance, has spent 65 per cent of its credits on weapons. To keep the ship of the state afloat, the generals borrow more, which they very often spend - through economic incompetence or vanity - on ostentatious rather than necessary projects.



Drawing by Igor Shein

The dramatic growth of interest on loans and credits has had a devastating effect on the financial position of the Latin American countries. In 1973, Brazil paid an interest rate of 3-4 per cent a year. Ten years later, the rate was 22-23 per cent. The blame for this goes not only to the creditors' greed but also to a fall of the dollar and to interest surcharges for financial risk. Other contributing factors include protectionism resorted to by industrialized capitalist countries to restrict the flow of imports, from the Third World, and the so-called price differential between the low prices for raw material imports from the developing countries and the high prices for the equipment and manufactured goods sold to them.

Can they pay their debt?

It is the most cherished dream of every nation to become financially self-reliant through setting up a solid economy. This does not rule out credits, however. International trade today is inconceivable without credits. The world market is not a place where goods are exchanged for cash. Major projects or large-scale purchases may require long-term credits, but those must be credits, not gifts. The fundamental principle of international law that pacts must be honoured is of course applicable to debts to the extent to which it can in effect be applied to them. But the trouble is that the developing countries simply cannot pay off all of their debts. Under the circumstances trying to solve

the debt problem, would be tantamount to attempts at squaring the circle. Uruguayan President Julio Sanguinetti summed up the situation thus: "There is a consensus on two things, one is that the debt has to be paid, and the other is that the debt cannot be paid."

The suggestion that the developing world's foreign debt be cancelled has its supporters and its opponents. The former proceed from moral and historical motives. The debtor countries, they argue, were robbed of their raw materials for centuries and that the former colonialists have adopted neocolonialist ways and are now

exploiting their cheap labour. In order not to pollute their local environment, the creditor nations are moving ecologically hazardous factories to the Third World.

Those are very good arguments but nonetheless, demanding that all debts be called off is an extremist stand. There are no guarantees that after debts have been called off the debtor nations will remodel their economies so as to be able to desist from borrowing. Besides, the credits have already been used by debtors to build production capacity, which gives them goods, profits and jobs. Not all of the credits have been embezzled by corrupt officials or thrown down the drain of military spending.

Another school of thought has it that the cancellation of all debts will be harmful to the interests of rank-and-file shareholders in creditor-banks, and generally speaking, the banks are under no obligation to present their assets to anyone. It may very well be that this particular financier has never had any deals in developing countries and cannot be charged with having pumped raw materials out of them.

To counter this line of reasoning there have been suggestions that the governments of creditor-nations should compensate the banks for the loss of credits by making payments from their national budgets. Capitalist countries make up their budgets by means of taxes imposed on corporations and ordinary citizens. If the above scheme were introduced, those whose incomes are not really big, who have never robbed anyone, but earned their livings by hard work, would be at a disadvantage. It must be said though, that ordinary citizens in this or that capitalist country do derive certain advantages from the exploitation of the developing countries by imperialist powers through the machinery of unfair economic relations.

If the developing nations default on their debts, the world capitalist financial system is likely to grind to a halt. Aware of that possibility, Western financiers have made some concessions because they are fully aware that the developing countries are unable to pay off their debts. Suggestions were made in the United States recently that the administration should "become a partner in debt restructuring at below par." It was announced at the end of last year that the U.S. Treasury had decided to guarantee securities issued by Mexico to reduce the debt owed by the government of that country by several billion dollars.

In search of a way out

Western financiers display incredible resourcefulness when the fate of their capital is at stake. Recently they have been engaged in trading debts. For instance, a country owes 100 million dollars to a bank. Having lost all hope of obtaining

the whole sum, the banker concerned sells his rights to a more influential financier for 60 million. Relying on all the levers available to him, the financier forces the country concerned to pay up and thereby nets a profit of 40 million.

Far-reaching disarmament measures could release huge funds for aid to the developing nations. The 4-per cent reduction in nuclear forces under the Soviet-American INF treaty is only a small step in that direction which will hardly mean a substantial saving for either power. Further steps are clearly called for and the developing nations are awaiting them.

In the meantime the Latin American countries are trying to resolve the problem as best they can. Significantly, none of the major debtors has demanded the cancellation of all debts.

One way to reduce the national debt is to increase economic efficiency and export earnings. Another is to take austerity measures, to raise taxes and prices, and that is what the International Monetary Fund and other Western creditors have been insisting on. A combination of these methods can be used.

Some nations simply cannot afford the former method: loan interest payments drain them of funds and, besides, their governments are not competent enough (as is the case of certain dictatorships I have mentioned elsewhere). That is why several debtor nations resort to the second tactic, forcing their citizens to tighten their belts and introducing long-term austerity policies. Chile is a case in point. According to *The Washington Post*, the country "has been held up as a model Third World debtor by international bankers' pleased with its free-market ideology, austerity measures, and clamp-down on unions."

The debtor-nations have been pressing for a rescheduling of their debts, or making new debts so as to pay the interest on the old ones, at least. This must not prevent them from carrying on with their

development programmes, or they may be totally bankrupted. The middle classes will manage to get by, but the ordinary people will have the single option of dying of hunger.

Political

settlement

Last year Brazil suspended interest payments, with the clearance of the debt proper obviously being beyond its means. Ecuador followed suit. The government of Peru, unwilling to impoverish its people further, limited debt repayments to 10 per cent of its export earnings, which increased its gross domestic product by 8.6 per cent in 1986; in 1987 the preliminary figure neared 7 per cent, which is over and above that in other Latin American countries.

Other measures recommended by economists include restrictions on the transfer of capital abroad. A total of 53 billion dollars has been transferred from Mexico to banks in the industrialized West since 1976. A perceptible effect could be achieved by clamping down on corruption. The Argentine economy lost 4.5 billion dollars as a result of the machinations of 90 presidents and board directors of banks and investment companies against whom legal proceedings have been instituted.

The debt crisis, once a purely economic problem, has acquired a pronounced political dimension of late. That is why the Soviet Union has said on many occasions at the U.N. and other international forums that it favours a political settlement of the debt problem as part of the restructuring of the entire system of international economic relations on a footing of equality and fair treatment of all nations, regardless of the path of development they have chosen or their present level of development.

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As large as seventeen pyramids of Cheops

Almost three decades ago, the first explosion broke the ground for the world's biggest-ever rock-filled hydroengineering project - the Aswan High Dam, as large as seventeen pyramids of Cheops combined. Over the two decades since its commissioning, it has produced upwards of 115 billion kilowatt-hours. And all the while people have been divided as to whether it is a blessing or a misfortune for Egypt.

Pros and Cons

Let us recall some of the arguments the opponents of the project advanced thirty years ago, when the dam was still on the drawing boards.

Most sceptics agreed that amid the impregnable cliffs, chosen as the site for the projected dam, the building scheme was contraindicated for physical, ecological, and economic reasons: Physically, it was impracticable because, critics claimed, the hard ground would be virtually unexcavable even by blasting, and the scorching heat, with temperatures above 40 degrees Centigrade from March till November, made working conditions there intolerable. Others feared that the ecological balance would be disrupted, water would escape underground, the Nile become shallow and that there would be widespread soil erosion. Finally, the project was considered commercially nonviable: everything needed for construction would have to be hauled a thousand or more kilometres across roadless country and into the heart of the desert, and it was anybody's guess when the building costs would eventually be recouped. The West was not therefore in a hurry either to support and fund the scheme or to become involved in it in any way. It was also necessary to settle matters

with neighbouring Sudan, which also relied on Nile water for irrigation purposes. The conditions in which the dam had to be erected were indeed gruelling. The ecological arguments of the project's opponents certainly seemed weighty. But the sceptics didn't take the main thing into account. Egyptian fellahin needed Nile water desperately and for them it was a matter of life and death. The river's run-off, which is largely formed in Equatorial Africa, depended on a host of factors, and was subjected to significant fluctuations. In normal years it averaged 84 billion cubic metres, whereas in high-water years it swelled to 150 billion, causing catastrophic flooding. By contrast, in dry years it dwindled to 45 billion cubic metres, triggering off devastating droughts.

The problem of controlling the Nile's waters did not arise under Nasser. The Egyptians had been attempting to deal with it for centuries, by building barrages and other water-management works which, however, only partially met farming needs.

It is only in the middle of this century that the idea was formulated of building a major dam on the Nile, which would make it possible to confine and collect water, build up a stock in the reservoir in high-water years, and discharge it in arid years so as to guarantee an average

annual flow of some 84 billion cubic metres. This would supply irrigation needs and make it possible to increase the sown area by 1.3 million feddans (one feddan equals 0.42 hectares and covert some 700,000 feddans from spring-flood irrigation to year-round irrigation, in order to be able to grow several harvests a year there. As for neighbouring Sudan, the high dam would provide that country with an extra 14.5 billion cubic metres of water for irrigation purposes, and enable it to treble its sown area.

On October 8, 1952, the Revolution Command Council of Egypt instructed Egyptian organizations to study the project. Their conclusion was unequivocal: it was feasible both technologically and economically. An international committee of experts was set up, which included famous foreign scientists. They scrutinized every aspect of the plan and confirmed that it was acceptable from every point of view.

It was only after competent national and international bodies had endorsed not just the idea in general, but the specific scheme proposed that the Egyptian government made the decision to go ahead with building the "miracle on the Nile."

Ways of raising the money now had to be found. The estimated cost of the dam was 415 million Egyptian pounds, a third of which had to be in foreign currency to import equipment. The Egyptians requested a loan from the International Bank for Reconstruction and Development, which first agreed to finance the project, though after long procrastination, and then suddenly went back on its word. President Nasser then announced the nationalization of the Suez Canal on July 26, 1956. The response was the aggression

by Britain, France and Israel against Egypt.

The problem of money for the Aswan High Dam was resolved only on December 27, 1958, when the U.S.S.R. and Egypt signed an agreement on a long-term Soviet loan for equipment supplies and technological assistance with the first phase of the building project. On August 27, 1960, the two friendly countries signed another agreement on a supplementary Soviet loan to complete all work on the scheme.

This correspondent, who has spent more than six years in Egypt, witnessed the ambitious Aswan project come into being. The conditions in which our own and Arab builders had to work were really challenging. Aswan marks the border line between the green, fertile valley of the Nile and a stone-and-sand, lifeless desert. The river valley runs through very ancient crystalline rock crumpled into folds, split by clefts and destroyed by aging. The rock is deposited along the Nile, and to the west and east of it there stretches the boundless Nubian massif - a mass of sandstone and clay combining to form fine yellow sand.

After the agreement to build the dam was signed, Soviet specialists finalized the lay-out of the hydroscheme. The dam was to be 3,800 metres long, 980 metres wide across the foundation, 40 metres wide on the crest, and 110 metres high. A headrace (upper) and tailrace (lower) canals and six parallel water conduits were to be built on the right bank.

Assault

The gates of the water intake at the mouth of the upper canal would regulate water flow to the hydroelectric power station, which was to be housed in a cavern hewn in solid rock where the tunnels ended. The station was to be complete with 12 turbines capable of generating over ten billion kilowatt-hours of electricity a year. Equipment from the U.S.S.R. was delivered by sea, river, rail and air. Thousands of Soviet citizens went to Aswan during the period of construction.

I still have the note-book in which I jotted down my interviews with the dam's builders at the time.

Vasily Korotayev, head of the production and technology department: "By January 1969, the main body of the dam was by and large completed. The bank wings were finished in March 1969. After that we levelled the slopes, planted trees and built a highway along the top of the dam. In May 1969, the last, 12th generating set was started."

Engineer Kemal Shakhin, in charge of assembly operations: "Equipment supplied by Soviet factories (there were some 300 of them) would come on time and was quite up to the mark, meeting the highest world standards. The main feeder switchboard - the hydroelectric station's command point and heart - was on the eighth floor of the ten-storey building of the station. Helped by electronics, the station was controlled by two Soviet and two Arab shift engineers."

Ivan Gusev, chief maintenance engineer at the station: "Soviet specialists did everything to train qualified people to replace themselves. By mutual agreement, by February 1969 they examined all Arab personnel who were to form the station's operating staff. Prior to that, we had delivered 50 to 100 lectures at each of the 20 different courses organized for different categories of Egyptian specialists, drawn up service forms and records and technical manuals, and translated them into Arabic and English. All in all, around 20,000 Egyptians were trained at Aswan in various skills."

A new Aswan

The expenses involved in building the project - 450 million Egyptian pounds - have long been recouped as the dam earns the nation about a billion pounds a year. "In the years when the Egyptian oil fields on the Sinai peninsula were occupied by Israel," the Cairo-based weekly *Roose al-Youssef* wrote in 1985, "Aswan was the only energy source and saved the country from energy famine." Salah Shikhab, director of the administration for Saad al-Ali, as the High Dam is called in Egypt, declared in 1987: "Aswan serves as the cornerstone of Egypt's progress."

The Aswan dam has made it possible to establish a permanent irrigation system. Links between inhabited areas have been improved, whereas previously they would be effectively cut off from one another every time the river overflowed its banks and the roads, dikes and other structures found themselves under water. The price of water has dropped, the earnings of agricultural workers have risen, and the rate of unemployment has been on the decline. In short, Upper and Middle Egypt have started a new life, all thanks to the High Dam.

Aswan itself has been transformed. It is now a major economic centre of national significance, with mining facilities that supply iron ore for a metallurgical works. As before, tourists continue to be attracted to Aswan by its botanical gardens, which boast 500 plant species and appear to be in full bloom throughout the year, and by

the island of Elephantine with its unique museum of ancient monuments. But there have also appeared new attractions - a four-kilometre embankment with a multi-lane carriageway, a cultural centre, a hospital and polyclinics, a technical institute, a vocational training school, and a television centre.

Aswan people have warm memories of the Soviet specialists who took part in the construction of the dam. "They did a job of work," says Ahmed Hasanein, who was an engineer at the time and is now deputy manager of the Aswan water-development scheme. "Twenty years have passed, but take a walk about the hydroelectric station and inside the concrete dam and not a drop of water will fall on your shirt anywhere. Many of the ingenious technical ideas used during the dam's construction remain unmatched, making it an amazingly modern structure, despite its age."

Many Egyptians in those years went as trainees to hydroelectric power stations under construction in the Soviet Union and look back with pleasure on those memorable days as well.

"They did their best"

Mechanical engineer Hasan Moursi told me: "I cannot forget to this day the six months I spent in Bratsk in 1965 and 1966. Frankly, I was nervous about how they would receive and treat me. But when I got there I felt as if I had never left my family. My Soviet friends (he mentioned dozens of names) did everything to make me feel at home. They taught me to ski, invited me to their homes, house-warming parties and weddings, took me on fishing trips, and arranged excursions for me. And the main thing, they shared all their expertise and knowledge with me. I came back with a lot of useful experience."

It was only rarely during my years in Egypt that I encountered any unfriendliness to us Soviet citizens. In Aswan, as nowhere else, the affection and respect of ordinary people are felt at every step.

A white marble lotus - a monument to Arab-Soviet friendship - rises towards the sky at the crest of the dam on the left bank of the Nile, offering a vantage point from which to observe the majestic panorama of Lake Nasser. "Over the long years of joint work, Arab-Soviet friendship has been forged and tempered to become as strong as the Aswan High Dam," reads the inscription in words that belong to Nasser himself. It is symbolic that placed in the foundation of the monument with the first batch of concrete is a little bag of golden

Volga sand - a gift from the great Russian river.

Does Egypt need Aswan?

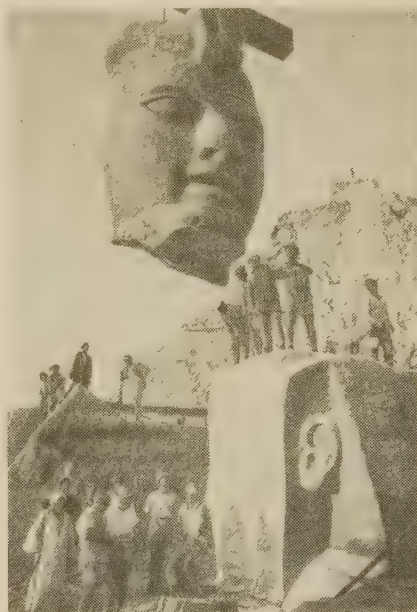
It is, paradoxically enough, the West rather than Egypt that has failed to reconcile itself with Saad al-Ali even today, and keeps trying to raise doubts both about the Dam and Soviet-Arab friendship. The fact that the West refused at the time to fund the project is now even being presented as being due to foresight, and those clamouring about the "irreparable damage" allegedly done by the major engineering structure of the 20th century are being lauded as prophets. In January 1987, just as the Aswan project was about to celebrate another anniversary, the London-based magazine *Middle East* deemed it appropriate to publish the opinion of the American scientist D. Stanley, who has gone to the length of contending that Egypt should be relieved of the Aswan dam. Or take the rumpus that followed the earthquake in 1981. The press, even papers in Egypt itself, were then making allegations about cracks in the dam's body, water seeping through and the threat of flooding in the Lower Nile area.

Times are changing, however, and the hostile allegations by the "Aswan's critics" are now being rebuffed by Egyptian authorities and scientific circles. Dr Ibrahim Ginaui, chairman of Egypt's National Commission for the Aswan High Dam, for example, commented on the U.S. scientist's assertions in the following way: "If Mr Stanley does believe that hydroelectric stations are 'harmful,' why do Americans continue to build them in their own country? There is nothing new in his arguments. Bank erosion in the Nile delta occurred long before the Aswan dam began to be built. This is quite clear from 19th century maps. So there's no reason why the dam should be accused of something it has nothing to do with, all the more so as all the possible consequences of its construction had been studied by us most thoroughly and taken into account even before the commencement of building work. When assessing the Aswan Dam's role in the life of Egypt today, one should be clearly aware that this water-development works saves our nation from hunger. The High Dam has done away with Egypt's complete dependence on the vagaries of the Nile in its upper reaches. In 1986, for instance, the Nile had less water than usual. Twenty-five years ago this would have caused serious difficulties, spelling hunger for millions of Egyptians, while now we do not have to worry about the water level in the Nile. The dam has enabled the Egyptians to live without fear of tomorrow."

Masterpieces preserved

Now let us take a look at the problems of resettlement and saving the monuments of ancient Egyptian civilization. That Lake Nasser would overflow and extend eleven kilometres from the main bed, with depths reaching 100 metres in some places, was taken into consideration, and the appropriate measures were adopted in advance. All the inhabitants of the flooded areas were moved to the safety of higher ground where they were provided with fertile land, subsidies and jobs.

Rescuing the monuments was a tougher proposition. The more valuable among them, such as the Qalabsha temple built under the Emperor Augustus (63 B.C. - A.D. 14), were between 1962 and 1965 dismantled and transferred to the left bank of the Nile, a little further up from the dam. But some of the lesser known monuments have been submerged.



That is how Abu-Simbel was moved from the bottom of the future sea.

From National Geographic (U.S.A.)

The most famous masterpieces of ancient architecture - the temples of Ramses II and Nefertari carved out of the cliffs of Abu-Simbel, 280 kilometres north of Aswan 3,200 years ago - were also threatened with flooding. The Egyptian government lacked the money to come to their rescue and it asked for international help. The salvation campaign was led by UNESCO and more than 50 countries responded to the call for assistance. It was decided to cut the rock temples into slabs, move them to a safe location, and then reassemble and restore the temples. The work, which involved UNESCO experts and 3,000 Egyptians, was launched in 1964 and completed four years later. Abu-Simbel had its second birth on September 22, 1968, at a gala ceremony attended by this correspondent. Those who had seen

the temples before were struck by the fact that they were exactly the same as when they stood on their former site at the edge of the Nile waters.

The political rationale of attempts to discredit the Aswan project is plain: the aim is to put one of the leading facilities in the state sector of the Egyptian economy as well as Soviet-Egyptian cooperation in a bad light. This cooperation, in the meantime, has a rich history and yielded tangible results. Besides the Aswan High Dam, the U.S.S.R. has helped Egypt to build 108 other projects, 95 of them already completed. Facilities built in Egypt with Soviet assistance account for 100 per cent of its production of aluminium, coke, metal-cutting machine tools and cold-rolled plates, 82 per cent of its output in pig iron, 79 per cent of steel, and 45 per cent of oil refining products. According to Egyptian expert estimates, investments in the building of Soviet-Egyptian cooperation projects have amounted to roughly a billion Egyptian pounds. In 1983 the profits from those enterprises were estimated at approximately 85 million Egyptian pounds, in 1984 in excess of 100 million, and by late 1987, at 150 million Egyptian pounds.

...Taking tourists along the Nile from Cairo to Aswan, guides have always shown them the landmarks of the past: the Giza pyramids outside the Egyptian capital, and the step-shaped Djoser pyramid some way off; the estate of the beautiful Queen Nefertiti in El Minya; the celebrated colossi of Memnon; the "Valley of the Kings," the temples of Hatshepsut and Karnak, and other ancient sights in Luxor, halfway between Cairo and Aswan. Nowadays the guides point proudly not only to the remains of the ancient Egyptian kingdoms, but also to the material evidence of the advances made by the Egyptian revolution under Nasser's leadership. The giant pylons of the power transmission lines running north of Aswan are now part of the desert skyline. Where sun-scorched barren lands used to stretch there are now blossoming plantations. And the Aswan High Dam itself is another Egyptian wonder, a miracle of today. Imposing in its grandeur as it spans the Nile, it is not only another compelling sight in historical attraction-rich Aswan, but a source of life and a protection against drought and famine.

"The Soviet Union," said Egyptian President Hosni Mubarak in one of his statements, "has given us much help and we shall never forget it. I reiterate this once again on behalf of the Egyptian people. Aswan will always be an eternal symbol of our friendship."

ANATOLY YEGORIN

Aswan-Moscow

Is spiritual renaissance possible?



EKATERINA KOZHUKHOVA



That culture is something that rightfully belongs to man, as it is his creation, is common knowledge. However, we also know that there is nothing that man has more consistently neglected than this finest of his creations. Civilization is justly proud of the Greeks, who implored the enemy on the point of destroying the Acropolis to get at the lead binding agent: "Don't destroy the Parthenon! We'll send you the bullets." But has anyone heeded such appeals?

The most enlightened peoples, let alone barbarians, have never stopped short of destruction to advance their own interests. Convinced that they were preaching culture, they divided culture into "ours" and "theirs." They carried away treasures born of human genius to adorn their own cities, preserving the stones, but scorning and destroying the spirit that imbued them; in short, they separated the creator from his creation, unaware that thereby they were not only betraying culture and the common cause of humanity, but destroying the spirit of culture within themselves.

The catalogue of destruction of culture both material and spiritual is endless. That destruction cannot be calculated, but it exerts an enduring influence on the mainstream of progress. True, those who drew up such lists have always countered the sober pessimism that Fellini has termed "courage devoid of illusion" with an optimistic faith in human progress. However, today when we are in a position, as the British historian Toynbee put it, to make the final choice between self-destruction or global unification for the first time in history, the ability to take realistic stock of our actions is more deeply appreciated.

We do, of course, still have the option of sceptically dismissing the warnings of the sages with the thought that past crises and renaissances will repeat themselves. Yet Chekhov had more confidence in humanity while Leo Tolstoi lived, as he raised so high the notion of the human. Men like Tolstoi helped the human race to understand itself and its destiny, and not lose sight of its high purpose and mission.

When I met him recently Leonid Leonov, the 88-year-old Soviet novelist, stressed this critical mass of mature, enduring issues and the spiritual malaise of people today. "Mind you," he added, "it persists despite our increasing care for physical health and sport. Yet we are seeing today a highly complex critical moment...."

"What life will be like over the next few decades is in the balance. Courage, depth and comprehensiveness are necessary. But though we have the courage, we lack the depth and comprehensiveness... Decision-takers should keep in mind the whole history of civilization, and only from this plateau that can take in every aspect should they view things. They should not fear revisions and reversals, should they be necessary, should they be in the interests of the logic of history."

I think Leonov's point to the effect that it is necessary - not

just desirable but absolutely essential - to take a world view of the mature problems of mankind is entirely in keeping with the concept of the World Decade of Development of Culture which the U.N. has announced on UNESCO's initiative.

The idea was initially raised some time ago, at the second World Conference on Cultural Policies in Mexico City in 1982. Subsequently, the UNESCO General Conference considered

**At its 41st session
in the autumn of 1986,
the U.N. General Assembly,
acting on UNESCO's
initiative, proclaimed
1988-97 a World Decade
of Development of Culture
to be sponsored
by the U.N. and UNESCO.**

the matter at its sessions until eventually the U.N. General Assembly endorsed the project.

The Soviet Union, with the other socialist countries, backed the project all along the line. It was one of the first countries to institute a National Committee for the World Decade of Development of Culture, which it did in May 1987. It was obvious at the Committee's very first meeting in the summer of that year that the Decade's strategic targets are very closely bound up with the crucial issues of the modern world and that culture, as the goal and medium of human progress, as the prerequisite for those that history has confronted with this unique opportunity to unite, is of epoch-making significance.

True, it should also be admitted that the world view is not without its dangers. These are the dangers of dogmatism and doctrinism which have more than once modified even the best-intentioned projects and offset utopian ideas. For that reason, it would certainly be worthwhile to heed the doubts voiced in this connection by the distinguished British scientist and Fellow of the Royal Society Julian Huxley, all the more so as he expressed them in his introduction to the UNESCO-sponsored six-volume "History of the Scientific and Cultural Development of Mankind." Can we discern any of history's laws or discover any significant general trends in historical development, he

asked, is there any progress in the realm of human endeavour and how can such progress be identified?

However, the Soviet Orientalist and historian, Academician Nikolai Konrad, whom the UNESCO ad hoc commission also asked to write an introduction to this historical account of the human spirit, took issue with Huxley. He said there was one aspect of the common activities of the human race that is of exceptional significance, and which should not be overlooked, especially in the light of today. This was, he said, the humanism which has accompanied mankind from its very beginnings. There were times, he went on, when it had almost vanished, but there were times when it had manifested itself most powerfully as, for instance, in the first millennium B.C., when the great sages, teachers and prophets preached humanism. In his view, the second great upsurge of world humanism began in 8th-9th-century China. Then the humanist ideas were enunciated not by prophets, but by philosophers and poets. "The humanist way is my rule," Firdausi noted somewhat later. In the 14th century, when humanism took root in Europe, Petrarch spoke of "humanitas."

The epochs that Academician Konrad has denoted are characterized by turns of the tide in history. Certainly mankind stands at the turn of the tide today, as the 21st century is about to dawn. Who will act as the herald of humanism now? Who will shoulder the responsibility? Who will say: "Let the consuls see to it that humanity does not suffer"? Perhaps, again, those known yesterday and today as the intelligentsia?

It would not be out of place, however, to recall Russian historian Vasily Klyuchevsky's opinion: "The intellectual only diagnoses, he does not cure. The people themselves lick and heal their wounds.... It is the role of the intelligentsia to spot and indicate these wounds in time. However, to see that something is amiss in the life of a given nation, it is essential to be familiar with the physiology of all mankind. Its job is to say: 'caveant consules.'"

The need for a comprehensive approach to understanding the destinies of mankind, for the revival and entrenchment of humanist values, the enhancement of the role of artists and intellectuals, and many other key aspects of cultural progress are reflected in the programme of action for the World Decade of Development of Culture that has now begun, sponsored by UNESCO and endorsed by the U.N. General Assembly.

The purpose of this document is to overcome the old stereotypes in the very approach to problems of cultural development. Underlying the project is the broadest of possible interpretations, as if in defiance of the multiplicity of competing concepts of culture throughout the world. Culture has been given specific meaning with regard to human progress, with an unprecedentedly lofty mission. The broader view of it incorporates more than just intellectual toil or artistic creativity. It embraces man's overall behaviour, his perception of himself, his society and the world around him. The results of the first two U.N.- and UNESCO-sponsored international decades of development have shown the blind alleys in which any concept of development can find itself if it is based exclusively on quantitative and material indices.

The programme for the present Decade is based on **the concept of culture and the development of culture, not only as a qualitative index of economic and social progress, but also as the ultimate goal of such progress.**

UNESCO's innovative approach in the way it has placed the Decade's objectives on the agenda derives not only from its abandonment of the usual quantitative indices, but also from the acknowledgement of values which, though they may have been declared time and again, were rarely taken as guides for

action. This is a recognition of the differences in cultures of equal merit, and a deeper comprehension of these cultures, with all this adopted in its entirety as a formula for one of the pillars of mutual understanding and peace. One could set out this thesis more succinctly as **the unity in diversity that is symbolic of genuine culture, the soil upon which mankind can come together.**

As I see it, these objectives are organically bound up with the concept of the new style of political thinking proclaimed by the Communist Party of the Soviet Union. They are also bound up with the tendency to humanize the policy of consolidating the integrity of the world with all its diversity, with the deepening of common humanitarian principles in the effort to achieve the objectives of practical policy expressed so eloquently by Mikhail Gorbachev at the most recent CPSU Central Committee Plenum in February.

It will take a stupendous effort to accomplish these objectives. However, society, aware of the critical condition of its position on the threshold of the 21st century, cannot afford not to make that effort.

As for ways and means of achieving these aims, UNESCO has indicated two directions in which all nations contributing to the Decade should focus their efforts. These two directions are interconnected and complementary. It should be emphasized in this context that minds nurtured on dogma and dicta can do nothing here, inasmuch as the aim is, on the one hand, to pay greater attention to the cultural aspect of all major processes of political and socio-economic development and, on the other, to stimulate creativity and cultural life generally. **Culture in policy and a policy that facilitates culture** - this thesis underlying the Decade's project gains in clarity when development is seen not only as technological or economic progress, but also as the aggregate of our effort to ensure the well-being of societies, consolidate basic human and social values, and allow populations effectively to contribute to their own development and display a more open-minded acceptance of other cultures.

The notion of **open-minded acceptance of other cultures** is deserving a particular note as it is, as I see it, crucial. It is to be especially prized by Russian culture the mainstream of which has, despite its historical vicissitudes, always sought a universal responsiveness.

Cultural open-mindedness and responsiveness are of major importance in that they offer powerful resistance to the dangers of homogenization and standardization, which have dogged mankind at every phase of scientific and technological progress, thus threatening the position of the individual and his creativity.

These innovative tasks call for innovative approaches. Happiness cannot come from the outside is a thesis crucial to the Decade's programme of action. Indeed, happiness can ensue only from the conscious activity of individuals in their appreciation of the complexity of the problems that face them and their assumption of fuller responsibility for the solution of these problems.

The work to be done in the context of the Decade should yield good fruit by the close of the 1990s. Yet it is already quite clear that the desire to restore cultural and humanist values to the pivotal place they should occupy in technological and economic development, the search for the answers to the issues that history has raised on the threshold of the year 2000, by which are meant the aims of development, the role of science as an element of culture, the place of culture in society, and the idea of the quality of life, will entail a radical **evolution in the way of thinking** and awaken hitherto undreamed of resources for creativity, capable of rejuvenating the very spirit of international cooperation.

A new look at CMEA-EEC cooperation

The CMEA foreign policy strategy options

YURI SHIRYAYEV,
Corresponding Member, U.S.S.R. Academy of Sciences

Sixteen years after negotiations between the CMEA and the EEC began the prospect of completing them has now appeared.

Only a few questions remain to be agreed for the CMEA-EEC negotiations to produce some, if limited, results. It is hoped that the talks will yield initial fruit this year.

In European history there have been issues which took thirty and even a hundred years to settle; in comparison, sixteen years of negotiations is not all too long. But if we look at things from the standpoint of the technological revolution of today which makes possible the rapid growth of production and the retooling of its technical base, a decade and a half is a veritable eternity. And the opportunities afforded by this "eternity" have, regrettably, in large measure been missed.

In this period the CMEA countries have displayed what is truly the patience of a Job. Suffice it to recall the numerous occasions on which they have advanced offers of cooperation with the European Community. There were two such offers in 1972; this was followed by fruitless negotiations between the two groups over the period from 1976 to 1984; in 1985 two more offers were made and 1986 saw further fruitless efforts to reach agreement. And only in March 1987 did CMEA and EEC experts meet at long last to settle still outstanding issues (the main one being that of West Berlin).

The simple solution is not always the best

Why have the talks dragged out so long?

There are very many reasons. And it would be wrong to lay the blame entirely

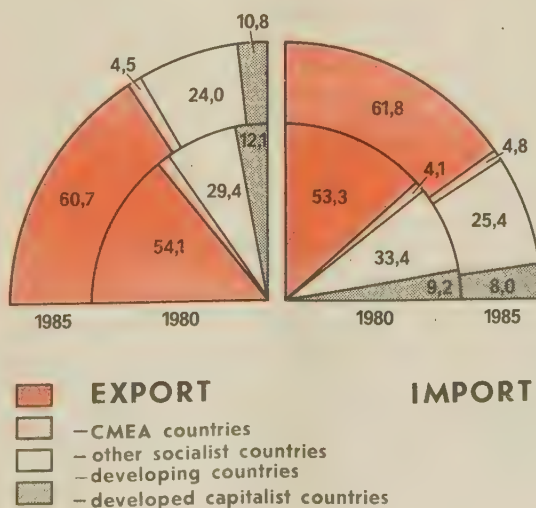
on the West European countries. It must be admitted that the style and methods of CMEA activity were not up to the mark, that it lacked coordination, flexibility and drive - in other words, it suffered from all those factors of inertia which are now being overcome in the process of the renewal and restructuring of the Council. These obstacles to mutual understanding objectively played into the hands of those EEC quarters which have been in no hurry to expedite the negotiations. For several years now it has been clear to many that all their legal casuistry as regards the "difference in competence" of the two organizations, the endless reservations and procrastinations had a dual purpose: on the one hand, to extract the maximum concessions and reduce to the minimum the joint emergence on the Western market of the CMEA countries, and, on the other, to divert their attention away from commercial contacts with other centres of world capitalism.

Let us be frank: we underestimated this manoeuvre on the part of our negotiating partners.

Today when the world is becoming increasingly interdependent and multipolar any striving to develop relations mainly with only one centre of the world capitalist economy is surely an anachronism. The very fact that top priority was given to only one of the multiplicity of economic questions reflected to some extent our ingrained habit of looking for the simple, cut-and-dried solution. But those times have passed. Today "the simplistic approach" is no longer the best one in resolving problems ripe for solution.

What was our approach?

Territorial proximity, the historically conditioned view of Europe as the axis on which all world problems revolved, prompted the CMEA to seek cooperation primarily with the West European countries. This led to an underestimation of the possibilities of developing relations with the United States and Japan, and in recent years also with a number of new industrial countries. The preference given to Europe was due not least of all to the remoteness of most of the socialist countries from the new economic groupings (ASEAN, for instance) and lack of experience in commercial dealings with them. But today such considerations are clearly invalid. Promotion of multiform trade, scientific and technological ties precisely with the new economic groups is now more timely than ever before.



REGIONAL PATTERN OF CMEA COUNTRIES' EXPORT AND IMPORT TRADE AS A WHOLE (per cent)

The regional pattern of the CMEA countries' foreign trade underwent substantial changes five years ago. Their trade disbalance with industrialized capitalist countries became a serious problem. Therefore, the CMEA foreign trade strategy called for a radical revision.

At the present level of the world economy, the economic advantage of the geographical proximity of the East European and West European countries can no longer outweigh other factors. And to make use of the possibilities afforded by the world market it is not at all necessary to reach out for the nearest potential partner. If we carefully weigh the anticipated returns, not only economic but also technological, and take into account all the possible variants of mutually advantageous cooperation (as we should do in the context of self-supporting operation and self-financing), we will find that the competitive capacity of the West European companies in the fifteen years or so has declined and can far from always be considered a standard to go by. Besides which the development prospect of the EEC countries, according to assessments published in the West, are by no means encouraging.

The alternatives

The three leading centres of the world capitalist economy are present at different stages of the technological revolution. In Europe we still see endless conferences of Common Market bodies discussing ways of reducing (not eliminating!) their technological lag behind the U.S. and Japan. Meanwhile the Land of the Rising Sun is already effecting radical structural changes and working out new concepts of industrial developments based on the technology of the 21st century. This, at a time when the West European countries are wrestling with the painful problems of overcoming the weaknesses of their own economic structures. The covers of advertising prospectuses are attractive enough, but their content is often quite mediocre. The West European Eureka and Esprit scientific and technological programmes are only initial steps towards changes, and even so are aimed at catching up rather than making bold strides ahead.

The Asian and Pacific region too is laying claim to a leading role in world civilization in the 21st century. And it must be admitted that the countries of the region, both the developed and the developing, possess no small potential in this respect. It includes the territorial and natural resources belonging to the world of socialism: Siberia and the Soviet Far East, China, Vietnam, Laos, Mongolia and the Democratic People's Republic of Korea... Here we have an interesting conglomeration of countries of different economic and political orientation, developed and developing capitalist countries (including the new industrial states - Malaysia, South Korea and Taiwan), and developing countries of progressive orientation, members of the CMEA and other socialist countries. If certain political differences are overcome and economic

interests harmonized in a spirit of good will, the cooperation between the different economic systems represented in the region be fruitful. The objective mutual interest of different countries in the promotion of cooperation is already manifest in the development of business ties on different planes.

In these circumstances it is perhaps expedient - irrespective of the outcome of the CMEA-EEC dialogue - to begin considering alternative variants of contacts with the world "power centres" whose products are more competitive and whose prices for manufactures, even if transport costs are included, tend to decline, especially in the case of advanced products - Japanese-made, for instance.

Incidentally, no Japanese businessman has any doubts as to the profitability of selling his products (primarily machinery and other industrial equipment) on the capacious market of the CMEA countries. True, in the opinion of Japanese business executives, some countries do not yet have anything to offer Japan - either in the way of raw materials or up-to-date industrial products (a fact they attribute to the inadequate scientific and technological potential of these countries). Nevertheless in some areas openings for mutually advantageous cooperations do exist.

But let us not anticipate. I concede that the conditions for productive negotiations between the CMEA and Japan have not yet matured. But this does not mean that the CMEA should put off indefinitely the search for an agreed policy of cooperation with Japan. A policy oriented on more effective utilization of the scientific, technological and economic potential of the community.

The CMEA countries taken together are fully capable of tackling practically any modern national economic task. The advantages of international socialist division of labour and of joint integrated undertakings already create the conditions not only for tapping natural resources together with Japan but also for the production of up-to-date science-intensive output and carrying out research and development projects. The realization in practice of a thoroughly considered and agreed policy in relation to Japan could also help to strengthen the foreign exchange position of the CMEA countries on both national and community-wide scale. This could create more favourable conditions for the further development of all forms of commercial cooperation with Japan on a bilateral and multilateral basis, given, naturally, the appropriate political conditions.

It is worthwhile considering, in the same spirit of modern economic thinking, the promotion of cooperation with other new industrial communities in Asia and Latin America as well.

Bilateral agreements

In evaluating the advantages accruing from multilateral agreements, I am not inclined to consider them the decisive factor in the overall process of international economic cooperation. The role of bilateral contacts should not be underestimated either. Despite the absence of agreement between the CMEA and the EEC, direct contacts between individual countries belonging to these communities have by no means been at a standstill. Over the past 15 years trade between individual countries of the two groups have increased, although with certain fluctuations caused by the ups and downs in the West European and world economy. There has been a strengthening of direct business contacts between representatives of the industries of the socialist and capitalist countries of Europe. Moreover, European banks, both state and private, have rendered extremely useful financial and other services as intermediaries. Joint firms and associations, set up with no little difficulty, have begun to make themselves felt in various spheres of the economy.

The CMEA countries advocating all-European cooperation no longer confine themselves to West European partners belonging to the Common Market. In recent years there has been a heightened interest on both sides in commercial ties between the socialist and the neutral countries of Europe - Finland, Sweden, Austria and Switzerland. The character of these bilateral economic relations differs from that of East-West contacts in general.

The share of the CMEA countries in the trade turnover of Finland, for instance, is 20.2 per cent as compared with 2.5 per cent in that of the developed capitalist countries as a whole and about 3 per cent in that of the EEC countries. Organizations specifically servicing trade with the CMEA have been set up in the neutral countries. Forms of commercial relations which best suit the socialist countries take shape more rapidly here. For example, Finland, and also Austria and Sweden make extensive use of up-to-date forms of mutually advantageous contacts. For one thing the stand taken by these countries has objectively led to a certain weakening of the united front of Western powers (we refer to the uncompromising stance they are at times pressured to adopt) vis-à-vis the CMEA countries, forcing the West to be more realistic in the choice of forms and methods of economic intercourse with the East.

An equally positive role has been played by the independent position of the neutral countries also as regards the policy of economic sanctions. Finland, Austria

and Sweden are opposed in principle to this policy as being incompatible with their neutral status, and no amount of pressure from the Common Market countries has been able to shake their resolve on this score.

There are also other facts testifying to the long-term significance of our ties with the neutral countries. It will be remembered that the central issue in East-West relations at the present stage of the technological revolution is the problem of the transfer of technology. Here the commercial contacts with neutral countries of Europe have resulted in the share of their industrial exports to the CMEA countries considerably exceeding in recent years the share of these goods in their total exports. It also exceeds by far the corresponding figure for other developed capitalist countries. The share of high technology in the exports of Sweden or Switzerland, for instance, to the U.S.S.R. is considerably greater than in the analogous exports of the developed capitalist countries in general.

The neutral countries unquestionably gain by the Western powers' policy of restricting their economic ties with the CMEA countries. This has become so obvious that some "neutrals" have actually been penalized for their attitude to economic relations with the socialist countries. Nevertheless such "punishments" have not been able to check the growing interest in business contacts with the socialist countries and in the search for new forms of these contacts evinced by countries not "tied" to the Common Market or the United States. The economic advantage of an independent policy with regard to the socialist states has been appreciated by such advanced capitalist countries as Austria and New Zealand.

Thus, if the traditional view of relations between the CMEA countries and the West as being limited to CMEA-EEC contacts is discarded and a broader view taken of the problem, the question is bound to arise: is the priority of these particular contacts really justified (from the standpoint of the economic and technological interests of the socialist community, of course)? The answer, I would say, is no. It goes without saying that a broader approach does not mean breaking off the relations that have already been formed with individual West European countries prepared to continue mutually advantageous cooperation. It is a matter only of more rational geographical orientation of our economic contacts so as not to limit them mainly to some one rather narrow sector of the capitalist economy of taking fuller account of its more dynamic sectors. This would undoubtedly serve the external economic interests of the socialist community and, in the final analysis, of the interests of the European economy as a whole.

G.D.R.

**An interview
with Erich
Mückenberger,
member of
the Political
Bureau of the
Socialist Unity
Party of Germany,
and president
of the German-Soviet
Friendship Society**



A FRIENDSHIP OF LONG STANDING

New Times: I have often met with your compatriots - acquaintances and friends, guests of the Soviet-German Friendship Society, and tourists - and have taken part in discussions with them. I am glad to note the amicable and frank atmosphere that prevails at these meetings. But in the history of our relations there have been periods different from the present one, periods which have left a deep imprint in people's memories. What are the roots of the change and the sources of our friendship?

Erich Mückenberger: Friendship has not come suddenly, as a gift. Its sources go back to a time long before nazism had been defeated by the Soviet army, the principal force in the anti-Hitler coalition. Friendship between our peoples has deeper roots.

At the end of the First World War, German soldiers fraternized with their Russian counterparts. In the German Democratic Republic there are veterans who took part in the storming of the Winter Palace in Petrograd in October 1917. One of them is Hans Mark, a former soldier in the Kaiser's army.

The foundations of our friendship were laid by such ardent revolutionaries as Karl Liebknecht, Rosa Luxemburg and Clara Zetkin, who enthusiastically welcomed and supported the October socialist revolution in Russia. In the 1920s a society of friends of the new Russia was formed in the Weimar Republic. Among its members were many such intellectuals as Thomas and Heinrich Mann, Lion Feuchtwanger, Arnold Zweig and Albert Einstein. A special role in the promotion of friendly ties with Soviet Russia was played by the Communist Party of Germany led by Ernst Thälmann.

On the occasion of the 40th anniversary

of the German-Soviet Friendship Society and the ceremony of decorating it with the Order of Karl Marx, Erich Honecker recalled the following observation of Thälmann: "German Communists have always believed that attitudes to the Soviet Union show on which side of the barricade a man stands. That will be so in the future too."

The League of Friends of the Soviet Union, formed in 1928, worked in just this spirit. It consisted mainly of workers - Communists, Social Democrats and non-party people - who decided to spread truthful information about the Soviet Union. That could only be done by campaigning against the anti-Sovietism that had systematically been whipped up in Germany since 1917.

The league, headed by Erich Baron, sent delegations of workers and peasants to the Soviet Union, and put out a newspaper advocating fraternal cooperation with the new-born Soviet state. At the end of 1932 it had more than 60,000 members. In 1933 the league was banned, together with the Communist Party, while Erich Baron became one of the first victims of the nazi regime.

N.T.: Did the thread of friendship break at that time?

E.M.: No. Despite the murderous terror unleashed by the nazi butchers, they were unable to kill the idea of friendship with the Soviet people. Members of the friendship society were brought before the merciless "people's tribunal" and sentenced to penal servitude for various terms. The general secretary of our party, who was convicted of illegal anti-fascist activity, spent ten years in Brandenburg hard-labour prison. Many people drafted into the Wehrmacht went over to the side

of the Soviet army and took part in the struggle against fascism and the imperialist war, fighting for a new, democratic Germany.

N.T.: Like Fritz Schmenkel, for example, who fought against fascism with Soviet partisans?

E.M.: Yes. We remember and honour deeply the memory of Wilhelm Pieck, Walter Ulbricht, Erich Weinert, Richard Sorge, Harro Schulze-Boysen and other German Communists and anti-fascists who continued the struggle at home and in exile even during the war.

In their radio broadcasts from Moscow they urged Germans to oppose the war started by the nazis. Their activity had a sobering effect on many in the Wehrmacht, officers included. This led in the end to the establishment of the National Committee Free Germany and the Union of German Officers. However, it was clear to the anti-fascists that only by relying on the aid of their Soviet friends, their brothers in the class struggle, and on the Soviet Union's might, could they win their fight and smash the gates of the concentration camps and prisons. This feat was accomplished by the Soviet army, and we are profoundly grateful to it.

The liberation of the German people from the nazi yoke allowed the Communist and Social Democratic parties to resume their activities. But the idea of Communists and Social Democrats merging into the Socialist Unity Party, whose banner bears the slogan of friendship with the Soviet Union, Ernst Thälmann's behest to the German workers, ultimately matured in the years of the underground struggle against fascism, in Gestapo torture chambers, in penal battalions, and in exile.

The SUPG has proceeded on the assumption that friendship with the Soviet Union is one of the great revolutionary achievements of our people. For their part, the Soviet people believe that hitlers come and go while the German people remain.

Soviet Communists, both men and officers, gave enormous help after the war. They proved to be real internationalists, giving their assistance where it was needed and helping millions of Germans to clear their minds of the anti-Soviet and nazi poison.

The victory over fascism made it possible to start building an anti-fascist and democratic system free of militarism and nazism, monopoly domination and anti-Sovietism. Thanks to persistent ideological and political work, the hostile image of the Soviet Union has been eradicated from our minds and the foundations of friendship with the Soviet people have been laid.



September 3, 1978. Cosmonauts Sigmund Jähn (G.D.R.) and Valery Bykovsky (U.S.S.R.) - the crew of spaceship Soyuz-29 - after landing.

N.T.: One can easily guess from this brief outline what a tremendous effort was put into the work of remoulding people's consciousness and psychology. As far as I know, you were directly associated with this work.

E.M.: Yes, of course. I recall my meetings with Soviet political officers, *Tägliche Rundschau*, one of the first official daily newspapers put out in the Soviet occupation zone, and cooperation with Soviet comrades in the society for the study of Soviet culture in 1947. We were surprised then to find that our Soviet comrades knew German classical literature better than Germans did.

After the SUPG was formed, I was elected secretary of a district party committee in Chemnitz, a city populated mainly by workers (now Karl-Marx-Stadt). When the society for the study of Soviet culture was set up, many adopted a wait-and-see position, and our organization initially had about 300 members. This hesitation was attributed to the residual effect of nazi propaganda. Moreover, anti-Soviet policy was still being pursued in the Western occupation zones.

A fierce campaign was launched against working-class unity and friendship with the Soviet Union. But our work bore fruit. In 1949 the society for the study of Soviet culture was renamed the German-Soviet Friendship Society. We have come a long way since then. Today our society is a nationwide organization with more than 6.3 million members. Following the establishment of the German Democratic Republic in 1949, friendship with the Soviet Union has become not only a constitutional principle of our state but also a vital credo of its citizens.

N.T.: We often say that our community has been tested by time, that it is a factor conducive to economic, social and politi-

cal development. How does it appear in practice?

E.M.: Not only our friendship but also our cooperation and combat alliance have stood the test of time. This is a solid foundation for progress and it is thanks to this that the G.D.R. today enjoys such high international prestige. It is the task of our society to preserve and carry on the traditions of friendship, educate new generations in the spirit of these traditions, and remind people that thousands of our own compatriots and Soviet citizens alike sacrificed their lives for this goal.

We are fighting shoulder to shoulder against militarism, fascism and apartheid, for peace, nuclear disarmament and the rejection of the use of armed force. We are working together to prove the superiority of socialism over capitalism and defend the interests of socialism. In line with the directive on preparations for the 13th congress of our friendship society, we are encouraging the creative initiative of all our members for the successful achievement of our objectives, especially in the field of socio-economic, ideological and political development.

All this work is being conducted in conjunction with other public forces. We see our chief task in strengthening our socialist fatherland, regarding this as our important contribution to the strengthening of the socialist community as a whole. By promoting the exchange of experience and ideas, we are strengthening our friendship not only in words but also in deeds. Our objective is to make friendship an asset of every citizen of the republic.

We shall never forget how our Soviet comrades helped us rebuild our ruined towns and villages and our economy. Today we are jointly tackling the tasks of scientific and technological progress and economic construction. As brothers in the class struggle and brothers-in-arms, we are jointly defending our gains and frontiers.

In the years of the Weimar Republic, members of the German Communist Party Erich Honecker, Erich Mielke, Paul Verner and other comrades took part in the building of the Magnitogorsk Iron and Steel Plant and other giant industrial enterprises. Today, when our countries are linked by the treaty for friendship, cooperation and mutual assistance, thousands of members of the Free German Youth and hundreds of experts are taking part in the construction of gas pipelines, an ore-concentrating mill at Krivoi Rog, and the sea ferry service between Mukran and Klaipeda. Thousands of young people go from the G.D.R. to acquire professional skills at Soviet colleges, while Soviet youths and girls study in the G.D.R. In this way they acquire a better understanding of each other's problems.

N.T.: This has brought appreciable results, as can also be seen from New Times' mailbag. At the end of last year our magazine held a quiz to mark the 70th anniversary of the October socialist revolution. Readers from the G.D.R. took a very active part in it. We were greatly impressed by their profound knowledge of history (the questions were by no means simple), the sincerity of their replies, and the civic maturity of their judgements.

Many letters come in regularly from the G.D.R. The opinions expressed by individual readers indicate the sentiments of a considerable part of the population. Readers take what is happening in the Soviet Union to heart, voice their earnest support for the present changes in our country, and ask a lot of questions about the economic reform and other aspects of perestroika.

E.M.: It is natural that the readers of your magazine in the G.D.R. should write letters to you and show profound and sincere interest in Soviet life, especially after the 27th CPSU Congress. This is a logical manifestation not only of the feelings of friendship but also of the socialist, proletarian solidarity of our citizens. This is how the party has educated us.

It should be noted that we in the G.D.R. also receive thousands of letters from Soviet people who want to know more about our experience of building developed socialism, show interest in various fields of German life, and ask questions about our society and our history. We entertain numerous delegations from the Soviet Union, organize meetings with them, and answer a lot of questions on various subjects, including the G.D.R.'s dynamic progress since 1971, and current issues of domestic and world development.

This helps people to understand that our countries are not developing accor-

ding to stereotyped plans. In this connection I recall Mikhail Gorbachev's report at the meeting to mark the 70th anniversary of the October revolution. "We have become convinced," he said, "that unity does not mean identity and uniformity. We have also become convinced that there is no 'model' of socialism to be emulated by everyone, nor can there be any. The totality and quality of actual successes scored in restructuring society for the sake of the working people is the criterion of socialism's development at each stage and in each country."

We naturally acquaint citizens of the G.D.R. with the changes taking place in your country and the decisions adopted by the 27th CPSU Congress. We help people better to understand the link between accelerated social and economic progress and improved Soviet living standards, and explain the purport of a more effective use of the achievements of scientific and technological progress, in our peaceful competition with capitalism as well as elsewhere.

We are sure that all these goals, including the strengthening and expansion of Soviet democracy, will be successfully achieved under the leadership of the CPSU. The people who carried out the October revolution, won victory in the Great Patriotic War, restored thousands of

towns and villages, and have built a powerful socialist peace-loving state will certainly achieve the goals set for the year 2000. As for the people of the G.D.R., they will give you their firm support, as before, and make their contribution to the common cause.

We believe that the economic agreements concluded between our countries will facilitate the fulfilment of these tasks. Likewise of great importance are the agreements reached by the Intergovernmental Commission for Economic, Scientific and Technical Cooperation between the two countries at its 41st meeting held recently in Berlin.

The implementation of these agreements and the fulfilment of the programmes coordinated within the Council for Mutual Economic Assistance fully accord with the need for an effective use of scientific and technological achievements. That is why we tell our compatriots: if we citizens of the G.D.R. successfully carry out the tasks set by 11th Congress of the SUPG, and the Soviet people fulfil the decisions of the 27th Party Congress by the time set, this will greatly increase the attractiveness of socialism.

Interviewer
**ROMAN
KRESTYANINOV**

Armed conflict ends

A cease-fire agreement signed by the heads of the Laotian and Thai military delegations came into effect on February 19, thereby putting an end to the armed border conflict between the two countries.

Troops, including aircraft and artillery, were involved in the hostilities, which flared up at the end of the last year, with both countries sustaining appreciable losses. This threatened to aggravate the already complex situation in the region, where the acute Kampuchean problem remains unresolved.

Laos did everything possible to settle the conflict by peaceful means. The appeal of its leader Kaysone Phomvihane to Thai Premier Prem Tinsulanonda met with a positive response. Thailand accepted the idea of holding talks between military delegations in Bangkok.

The delegations were headed by General Sisavat Keoubounphanh, chief of staff of

the Lao People's Army, and General Chawalit Yongchayuth, commander of the Thai army.

As a result of the talks, both sides agreed to a cease-fire on the border and to the removal of their troops to three kilometres from the line of hostilities. Laotian and Thai servicemen were ordered to avoid armed clashes and settle all issues "in a spirit of mutual understanding and good will."

The military delegations also proposed that, within 15 days of the cease-fire, their governments start political negotiations to settle the territorial dispute on the basis of international law, the Franco-Siamese treaty of 1907, and the appropriate maps.

By putting an end to the armed conflict, Laos and Thailand have vividly demonstrated that a mutually acceptable solution can be found in any difficult situation, provided the parties display good will, responsibility and understanding of their supreme national interests.

ALBERT PIN

BEWARE OF TREFOIL

Lessons of the Golanla tragedy

It all started thriller-style: In the dead of night two tramps found their way into an unobtrusive building in the centre of Golanla, the capital of Golas State, Brazil, and sneaked out an awkward and odd-looking device in the hope of selling it. Having taken the contraption apart at home, they saw that it was unlikely to interest anyone and sold it to a scrap dealer for a song. Shortly afterwards, the buyer noted an unusual fluorescence on the highly polished cylinder. Out of curiosity, he ordered his men to smash the mysterious capsule, which turned out to contain a luminous powder...

A genie was released. An invisible but ruthless genie: the hapless thieves had robbed an abandoned radiological centre, the contraption proved to be a powerful caesium gun, and the luminous blue-and-white powder - the radioactive substance known as Caesium-137.

Radiologist Georgi Selidovkin, an expert in bone marrow transplants and intensive haematological therapy, flew to Brazil as a Soviet consultant immediately after the news of the tragedy had come in. On his return home he granted us an interview.

Dr Selidovkin, what happened next?

No one as much as suspected that the luminous toy was dangerous. The "magic powder" was handed out to friends and acquaintances and imperceptibly spread about on soles of shoes and clothing. Contacts with the powder caused severe illness and serious burns which later developed into ulcers. There was obvious cause for alarm. The doctors whom the victims consulted had never seen such cases before.

Did they then sound the alarm in Brazil?

They did. The IAEA convention on aid in the event of an atomic incident or radioactive contamination signed in September 1986, was brought into play for the first time to deal with the situation. Scientists and doctors from the U.S.S.R., the U.S.A., the F.R.G., Argentina and Israel at once responded to the call for help.

Why did the choice fall on you specifically?

I think it was largely due to the experience I had had in Chernobyl where I worked right from the start to determine the degree and gravity of exposure and give victims first aid.

Just how complicated did the situation turn out to be?

I learned about the accident on October 5, reached Rio de Janeiro late on the 7th, and saw my first patient the following morning - by that time the ten gravest cases had been brought from Goiania to the city naval hospital. Later, four more victims joined them. In all, 26 persons were admitted to the hospital, 17 of them suffering from acute radiation sickness.

Besides you, there were representatives of four other countries in Brazil...

Yes, it was the first time since the signing of the above-mentioned convention, and the second time since Chernobyl, that international aid was given to radiation victims. Two doctors from the U.S., Juan Carlos Jimenez, a leading expert in caesium radiology, and a member of the IAEA from Argentina; and radiology physics experts from the F.R.G. and Israel arrived in Rio de Janeiro at the same time as I did. The American doctor Robert Gale, whom I had met in Chernobyl, joined us a little later. Although we came together quite spontaneously, ours was a real international team which did well-coordinated and efficient work. I have every reason to say that the

convention stood this acid test with flying colours.

How did you get along with your foreign colleagues?

In Brazil our international group split in two: the scientists from Israel and the F.R.G. worked in Goiania proper cleaning up the contaminated areas and the rest of us in Rio de Janeiro, which we occasionally left to examine mild radiation cases who had remained in Goiania.

We divided our efforts: Jimenez concentrated on removing caesium from the patients' organisms; the Americans and myself dealt with radiation injuries. First and foremost we had to establish, on the basis of clinical evidence and laboratory findings, the level of radiation. The next stage, of no less importance, was to decide whether a marrow transplant was necessary in a given case. That was what occupied us for a few days after our arrival in Brazil. It turned out that not a single patient was sufficiently badly irradiated to need this complex and rather dangerous operation, and that all of them would survive, given correct treatment.

We realized full well that the prime factors for success were the isolation of the patients and the early administering of antibiotics... Brazilian doctors had done the former irreproachably before our arrival, but for lack of experience had not quite succeeded in the latter: four patients who might well have been saved were mistreated for infections which developed and killed them in the end.

Robert Gale is said to have brought a new medicine to Brazil. Did he really?

He did. Much has been written about this new medicine, which is known to promote the restoration of leukocytes after operations on the marrow and to be effective in treating AIDS cases. However, it was now being used for the first time as a remedy for acute radiation sickness. As for its effectiveness, no final judgement can yet be pronounced as it was administered to patients whose bone marrow had begun to regenerate on its own. In fact, we were even opposed to its

use for fear of unexpected side-effects. As I have already said, there was no need for bone marrow transplants, and so Gale did not stay in Brazil for more than a few days.

Our and foreign papers drew parallels between the Goiania and Chernobyl tragedies. Couldn't you make such a comparison in terms of medicine?

Quantitatively, there were far fewer victims in Brazil. In the Ukraine we had to evacuate thousands of people from the territory adjacent to the atomic power plant, while in Brazil things didn't go beyond cleaning up a few tracts of land (the rumours of massive land contamination were greatly exaggerated). Qualitatively, the difference is more striking: the Chernobyl accident victims were irradiated with unstable iodine-131 with a half-life of a mere thirty days - and none of it was left in their organisms after two months. In Brazil, on the other hand, people were irradiated with Caesium-137 isotopes with a half-life of nearly thirty years...

Did this make treatment more difficult?

The patients were admitted to hospital contaminated, i.e., with radioactive matter on their skin. Having no experience of

That was what everything began with in Goiania. No special place had been allocated for the disposal of radioactive waste in Brazil. Had the obsolete caesium gun been properly "buried" instead of merely dumped, there would have been no tragedy. To date tons of radioactive waste have accumulated in Brazil and require immediate and reliable disposal. This has become a pressing problem for the country, where the Green party is extremely active. Even the bodies of the four who died, though sealed in multilayer lead coffins, could only be buried after the whole cemetery had been cordoned off by police.

However, the problem of such accidents remains. Are they inevitable?

No, inevitability is out of the question here, although this was the second major accident since Chernobyl. Both tragedies were caused by negligence, flagrant violations of safety rules. I don't think I need dwell upon the causes of the Chernobyl accident again. - New Times readers certainly know all about them. As for Brazil, the obsolete unit should have been dismantled, scrapped and buried. This standard safety regulation had not been complied with...



Radiation check.

From *Veja* magazine (Brazil)

dealing with patients of this kind, local doctors were scared at first, probably even more so than the patients themselves. The Goiania hospital personnel even demanded a pay rise in this connection...

Actually, personnel protection is no problem at all: those handling radiation cases have to wear special gloves, overalls, plastic boots and masks, and the period of their contact with the sick must be limited. However, all the patients were gradually decontaminated while in hospital, and contacts with them became safe for all practical purposes.

What about the problem of radioactive waste disposal?

Can such accidents be avoided?

Avoiding them is not really much of a problem. First of all, every radioactive object should bear an appropriate label. Such an international label - a trefoil - already exists. It is a warning of danger. Second, such objects must be stored and used in strict accordance with safety rules, kept tabs on, and issued only to experts. And, the most important requirement of all, the public at large must be educated in the hazards of radiation. Today all of us know better than to climb a high-voltage transmission line support just for the fun of it. On the other hand, for some reason, radiation is often not taken seriously...

The future is with atomic-power engineering, and no one can halt its further progress.

What is the outlook for international cooperation among doctors of the kind you had in Brazil?

According to IAEA statistics, 10-12 persons a year get irradiated in the industrialized countries alone. International cooperation must be promoted and encouraged in every way because it benefits all. It was just such cooperation that helped the Brazilians to cope with the situation they had found themselves in. I am happy I had a hand in this noble effort, although I must say that I did encounter occasional snags. Well, you cannot expect everything to go smoothly.

What do you mean?

It was an urgent call, and I had to go at once. That I could understand, of course, considering what had happened. What baffled me completely was why nobody bothered to supply me with hard currency before my departure (and still more surprisingly, before my return trip). I waited almost 24 hours in transit in Lima airport. I couldn't afford either a hotel room, a snack, or even a walk outside (for I would have had to pay an entrance fee to get back in, albeit a token one). Luckily, toilet facilities were free...The Soviet Union's international contacts are broadening from day to day, and I hope such "trifles" will no longer complicate matters for those on important and, as a rule difficult international missions. The appropriate officials (at the U.S.S.R. Ministry of Health, in particular) must do something about that.

What is the most important outcome of your trip?

Our cooperation saved many lives.

What was your frame of mind as you left Brazil?

Fate had brought me into contact with leading radiologists and physicians. Our common effort enriched each of us and, I hope, proved useful to the Brazilians with whom I worked for almost two months after the main group's departure (the group stayed there for only a week). At the hospital I often worked far into the night, examining all the patients, conducting consultations on a large variety of subjects ranging from the patients' regimes to problems of surgery and conservative treatment... As I was leaving for Rio de Janeiro I knew that Soviet-Brazilian relations had not been particularly close over the past few decades. Nevertheless, I found myself among attentive, amiable and benevolent people, and carried out my unexpected mission in a businesslike and comradely atmosphere. The patients pulled through and started to recover, and I left Brazil feeling perfectly reassured.

Interviewers:

T. CHERNOVA, V. GALIN

NEW TIMES 9.88 27

BROTHERS IN INTELLIGENCE

The emergence of the computer is not altogether devoid of side effects. We have already encountered what is known as computer phobia, an anomalous psychological condition and a phenomenon new to human experience. Like other phobias, this one is accompanied by perspiration, nausea, suffocation, and fear. Occasionally victims are seized with fear of imminent death.

How to stalk the wild computer

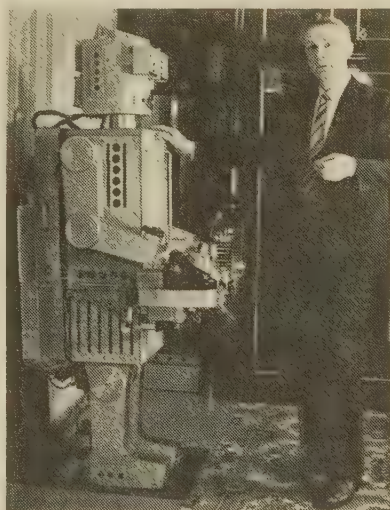
Computer phobia may be caused by the impossibility of controlling the actions of a machine or verifying its results, fear of being replaced by the computer, failure to understand the principles of computer operation, the awesome sight of numerous keys and buttons, or even by your six-year-old son's request to help him find an error in his Basic programme.

David Wilson, 43, decided to purchase a personal computer. Finding himself among veteran computer users, however, he just couldn't bring himself to ask the computer a single question ("I felt stupid"). The friends who tried to "break him in" only made matters worse: as soon as they told him what this or that computer unit was called, Wilson became hysterical. A month later, however, he "had learned the ropes," so much so that he even took up an instructor's job in a computer school. One of his courses, based on his own early phobic experience, is called "Stalking the wild computer."

Professor Sanford Weinberg of Philadelphia claims on the basis of his research statistics that 30 per cent of Americans suffer from computer phobia. Other researchers put the figure at a mere three per cent, describing the condition of the other 27 per cent as phobia-related computer allergy or computer hysteria... Be that as it may, specialists have already diagnosed a psycho-computer syndrome.

The interaction between man and the computer is not always as useful as was

originally supposed. Serious social and psychological problems arise in the process. If viewed as an "animate object," a computer can excite hatred or (as some people do) active dislike; and if regarded as an organism, it can cause irritation and aversion of the kind one feels towards certain animals. On the other hand, if a computer turns out to be a very good partner, it can cause anthropophobia (dread of other humans and unwillingness to be involved with them).



Boris Grishin, a former technical school-teacher of Kaluga, and a robot secretary of his making.

TASS photo

A thinking machine!

One of the earliest and best known tests of a computer's thinking capacity consists in the following. A man is assigned to

exchange messages with a computer placed in another room. If the dialogue leaves the man uncertain as to whether his interlocutor really was a computer, then the latter thinks.

The West German chess grandmaster Helmut Pfleger arranged a display of multiboard chess playing a few years ago. A computer enthusiast decided to use the opportunity to carry out an experiment. He asked a friend to take part in the game, with tiny earphones camouflaged under his long hair, and relayed to him by radio the moves prompted by one of the best computers at the time. Pfleger lost. What's more, when told that he had played against a computer, the grandmaster could not, hard as he tried, discover which of his opponents was the computer. Was the computer capable of thought? In a similar situation, however, Garri Kasparov (who was still to win the world title at the time) gave the correct answer instantly.

Today artificial intelligence is identified with the fifth-generation computers scientists are actively working on. These machines will take into account not only facts, but the relationships between them. Unlike their predecessors, they will be able to draw conclusions from a vast amount of information, learn to solve new problems without human interference, and function in widely different conditions. Artificial intelligence is a programme which enables the computer to imitate human lines of reasoning. The main idea is to make computers more like people, so as to spare ourselves the need to comply strictly with the machines' requirements. Such programmes already exist. Programmes called Intellect, intended for IBM computers, make computers responsive to verbal commands such as, "Give me a report on last week's sales."

For those busy creating artificial intelligence, the word combination "electronic brain" is not even a metaphor: the computer and the brain differ merely in that the former consists of electronic components, and the latter of biological ones (incidentally, there is a science,

molecular electronics by name, concerned with developing organic bio-circuits for computers). So thinking is no longer a prerogative of the human brain!

There are other aspects to the problem of artificial intelligence. The legal protection of computer-created poems, music and drawings is being discussed at international level. In modern legal practice, copyright is granted either to the algorithm synthesizer, the computer's owner, or to the computer itself!

Fifth-generation ("thinking") computers, let alone the generations to come, will bring man up against exotic problems. First of all, it will be necessary to devise legal norms to govern the behaviour of man-made intelligence systems - something like Isaac Asimov's famous laws of robotics. Second, how are intelligent robots to be punished for their mistakes to prevent them erring again? The idea of punishing robots is not so far-fetched, considering that computers of the future may come to control the social sphere to a much greater extent than we now think possible.

The computer is a symbol of progress today, as the steam engine was in the recent past. The "locomotive of history" symbolized ever faster and deeper linear progress. The computer has replaced this endless straight line with a circle. Upon attaining a certain objective, it stops. Infinity does not exist as a concept in the computer's world.

A programme solves a given problem by breaking it up into its components. Not all problems can be solved in this way, of course. What this means is that "computer man" identifies those problems that lend themselves to logical structuring and analysis within a limited time span. As far as the computer is concerned, progress is assessed in terms of the efficiency with which its programme produces the requisite result within acceptable time limits. Whatever our approach to simulation, we must always bear in mind that computer time is finite, not infinite.

The "computer man" relations with space are more complex. The ancients considered space to be finite, and it wasn't until much later that thinkers introduced the concept of spatial infinity. This created a distinction between material and conceptual space: a craftsman visualizes his creations in stone, wood or metal, whereas a thinker describes ideas. Mathematicians have built a bridge between these two approaches, and the "computer man" can both conceptualize and materialize space (an unprecedented achievement!). Its space is flexible, palpable, and logical. The computer exists in two dimensions, as it were: in logical reality and in the electronic realization of logic.

All the resources of the electronic world - time, memory, data processing facilities, data input and output rate - are finite. Computer operation is a good example of how to make economical use of scarce resources; it certainly has an effect on our mode of thinking. If we strive for progress at all, shouldn't we revise our views along its trajectory? It is hard to tell what our final decision will be, but to a "computer man" progress means recurrent cycles. This is somewhat reminiscent of the ideas of the ancients.

Dangerous games

This is the title of a Russian edition of David Bischoff's story, based on a cinema hit, "War Games," about a schoolboy who all but provoked a third world war by breaking into a missile control centre with his personal computer (see New Times No. 9, 1987). It is amazing how promptly fiction can become reality! A group of Milwaukee kids who saw the film decided to follow the main character's example and use the name "Joshua" as a key - with the result that they gained access to the computer of the Los Alamos nuclear centre!

These young "intruders" who get a kick out of penetrating private and government computers are known as hackers. They are a special type of "computer man" with an expert knowledge of data systems. Using telephones and personal computers, they get through to data-transmission networks linked to almost all the major computers employed by the economy, research centres and banks. What's more, these networks communicate with those on other continents, giving hackers the opportunity to tamper with data flow on an international scale.

The Milwaukee hackers confined them-

selves to studying the information fed into the computer they had found the key to. It transpired at the U.S. Congressional hearings, however, that another group of American hackers had gained access to the U.S. Defence Department computer and tried to make changes in its top-secret programmes.

Such incidents are by no means few. Journalists on the French paper *Le Matin* got a group of hackers to demonstrate their skills right in the editorial office. The seventeen-year-old hacker nicknamed Pythagore broke into the British Defence Ministry's data bank right before the eyes of electronic systems experts. The American hacker Richard Cheshire was invited to a conference of computer security experts in Munich. Like Pythagore, he promptly gained access first to the German and then to the American data networks and then found his way into one of the United States' most important strategic computers.

The hackers have gone all the way from playing at Captain Power ("shooting bad guys out of space") to games fraught with the danger of a nuclear holocaust.

Are you afraid of death?

Here is a quotation from Karel Capek's play "R.U.R.":

"...We are as much automatons as we are thinking beings."

Drawing by I.Blynsky



D o m i n . This is death, Marius. Are you afraid of death?

M a r i u s . No.

D o m i n . See, Miss Glory? Robots are not attached to life. There's nothing to attach them to it..."

This probably explains why the American "computer man" is not afraid of deploying SDI systems in space and why the U.S. military make cynical plans for the disposal of the dead by means of robots which can take corpses to the nearest cemetery at a mere push of a button.

And yet Capek was mistaken.

It happened in Ohio, U.S.A. A local company employed a line-gluing robot which always functioned without a hitch. All the employees liked it, and called it Josephine. Then one day Josephine's metal manipulator-hand picked up a can of highly-active solvent instead of glue and poured it into its body, which was packed with electronic gear. It was the first case of a robot committing suicide. Why did the robot do it? What was it trying to tell us? Was it a warning to "computer man"?

Man's effort to create brothers in intelligence has produced, instead, a new universe - an electronic one - with its vast electronic logical space and with its own time scale. Today the computer is both a means of communication and a research tool. It has proved of use to scientists and artists alike. It introduces notions of mathematics, physics and logic into the

humanities. With time, we can all of us become "computer men." As our communication with the computer gets closer and lasts longer, we shall grow increasingly computerized in thought and speech. As Blaise Pascal put it in the 16th century: "Let's face it, we are as much automatons as we are thinking beings."

It probably pays to follow the advice of an authority, such as Norbert Wiener, who said: "Render unto man the things which are man's and unto the computer the things which are the computer's. This would seem the intelligent policy to adopt when we employ men and computers together in common undertakings."

"Computer man" has an interesting property. While in the electronic universe of his machine, he varies its elements to suit them to the task in hand. He is changing the world! The main thing for man is to change the world as he thinks fit. Biology knows numerous examples of various species changing their strategy in order to survive. Why not interpret the changes in the situation involving computers as their survival strategy, as part of their symbiotic relationship with man, the stronger species? It's time man noticed the ever-lengthening shadow cast by computers on the future of mankind. This future lies not in the replacement of man by the computer, but in the merger of the two. Synthetic intelligence holds greater promise than artificial intelligence.

YURI BATURIN

companies has created an atmosphere of "accord" between the workers and industrial robots. So far their "honeymoon" has not been marred by rivalry.

Many young workers employed by big companies are seeking jobs in robotized factories. They sincerely regard robots as their charges, and take loving care of them. Some workers call their robots all sorts of pet names, and are even emotionally attached to them. This makes for a favourable psychological climate in the factory shop and, consequently, for greater work efficiency.

Such idyllic relations between robots and men do not develop overnight. They are carefully cultivated in Japan under the slogan "Make Friends with Robot." The Japanese are exposed to this from an early age.

The world of almost every Japanese child is crowded with robotic toys. A typical nursery is alive not only with working models of various machines and mechanisms, but also with "thinking" robot toys made to look like pet animals, birds and fishes, some 10 cm long, other smaller still. All of them carry out their small masters' wishes and are obedient to them. A plush cub, for instance, responds to caresses with gleeful yelping, and to strangers, with aggressive movements of its body. If a little "mother" is kind to her miniature baby doll, it babbles in appreciation, but bursts into tears if scolded.... Boys amuse themselves with even more fascinating playthings: tiny soldiers that obey commands, automatic vehicles that circumvent obstacles and stop in front of their owner, and electronic devices that can be taught various "skills."

The robot known as Tommy is a good playmate and fun to talk with (it recognizes its master's voice). Tommy never gets out of control and is, in fact, so lifelike that a child can enjoy its company for hours. These robots come in a large variety of models, Tommy the Servant being the most popular with children and adults. It greets its masters every morning, serves them at breakfast, helps them on with their coats, and sends them off to school or the office.

The Japanese use the services of robots in their homes, at shopping centres, cafés, restaurants, and places of entertainment. Since 1982, the Sujimo company has been producing a robot chef capable of cooking sushi, a Japanese specialty, with the best of them - but a great deal faster.

This largely explains why the Japanese feel no resentment towards robots on the factory floor. Rather the contrary, since the electronic helpers often do jobs no human is able, or willing, to do.

**I. LADANOV
and V. PRONNIKOV**

Making friends with robots

The first industrial robot to have found its way to Japan came from the United States. It was displayed for all to see in 1967, just as Portuguese guns had been in 1543. History was repeating itself, as it were. In those bygone days, some shipwrecked Portuguese gave the Japanese a dozen of their muskets in exchange for food. Thirty years later, all Japanese soldiers were already armed with exact replicas. In a similar situation today, everything happened much faster and on a larger scale: it took Japan only a decade or so to manufacture and put into industrial use more robots than the rest of the world then had. In 1985, Japanese industry employed 120,000 robots, 48,000 of them third-generation ones.

The advantages of robots are obvious. They appeal to businessmen in practically all the industrialized countries. Nevertheless, Japan is the only country to make full use of them. Why?

Industrial robots rival human workers in many respects. An electronic work force is cheaper.... Strong opposition to the robotization of production is mounting in the capitalist world. Anxious to keep their jobs, working people in the West are resisting the massive onslaught of industrial robots. In many cases the workers have the trade unions' support in this struggle. In Japan, however, the situation is entirely different. The lifetime employment system adopted by the big

An ancient mystery unraveled

Varnish that saved the Parthenon

Portraits dating from the 1st century A.D. were found in excavations in the Fayum oasis in Egypt in 1887. The striking thing about them was the degree to which they had been conserved. The colours were amazingly vivid and the painting technique was excellent. The portraits had been executed with wax paints whose formula was lost and, it seemed, lost forever.

The only person who knows the formula of the ancient wax paints is Tatiana Khvostenko, a member of the Union of Soviet Artists who lives in Moscow. Her father, Vasily Khvostenko, was also an artist. In 1955 he was granted a patent for his rediscovery of the formula of ancient wax paint. He became interested in it while at college and, after a life-time of hard work, he made his discovery. He paid for it dearly: after experimenting with paints containing mercuric vermilion he died of mercury poisoning.

His daughter Tatiana continued his work and unravelled the mystery of the phenomenon. She did not confine herself to theory, and used the rediscovered varnish to apply a protective coating to the Tomb of the Unknown Soldier outside the Kremlin Wall in Moscow, and the monuments to the physician Nikolai Pirogov, the opera singer Sergei Lemeshev, and aircraft designer Semyon Lavochkin.

Wax-based encaustic paints were used in antiquity but, before the Fayum finds, the only thing that was known about them was that they were mentioned in ancient manuscripts.

The artists and architects of antiquity had an eye to eternity. Tatiana Khvostenko explains that the reason the Egyptian pyramids are still standing untouched by time or erosion is not just their enormous size. They were covered with a coat of a wax-based varnish known to ancient Egyptians. It was the same protective technique that preserved the Acropolis in Athens until the city was captured by the Turks who kept gunpowder in the Parthenon. A fire there did great damage to the Acropolis, and the protective coating was destroyed. Since then, the Acropolis has been deteriorating, and the process has recently been accelerated by atmospheric pollution. Car exhaust and sulphuric acid carried by precipitation

have had the effect of turning marble into gypsum, and the ensuing erosion caused by fungi completed the damage.

Trajan's column in Rome built in 111-114 A.D. was also covered with a wax-based varnish, as was the famous Venus of Milo. The list is endless. Encaustic articles were found in primitive ritual sites in the Minusinsk depression in Siberia, alongside rock drawings dating back 35 thousand years. The Fayum portraits painted at the dawn of our era are juvenile by comparison.

The action of the varnish appeared at first sight to be fairly straightforward. On heating a paint formed of a very thin layer of caked varnish which protected various articles from atmospheric moisture, solar radiation, sharp falls in temperature and biological and mechanical erosion. The paint under the coat of varnish remained soft.

It is of course very hard for us to imagine that tens of thousands of years ago a technology was used that is unknown in this technological age. But that technology has preserved antique articles to this day.

Tatiana Khvostenko has found paintings, ornaments, shrines, statues, and stone arrow heads protected by that varnish in places as far apart as Central America, the Sahara, Siberia and the Mediterranean. Having analyzed gold and bronze ornaments found in Egypt, as well as various marble and limestone articles, scientists had managed to determine all but 1-2 per cent of their ingredients, but those few percentages remained a mystery and it was impossible to identify what accounted for them.

The French explorer Henri Lhote discovered querns in what were once oases in the Sahara. He could not explain what they could possibly have been used for, as no grain was ever grown in the Sahara. According to Tatiana Khvostenko, they may have been used to prepare encaustic paints. She points out that many encaustic articles were found in the same areas.

How can such a thin layer of varnish protect paintings, statues, and whole buildings from the destructive effects of time? Tatiana Khvostenko shared some of the secrets during our meeting. She said that the varnish contained Punic wax and



Tatiana Khvostenko at work.

natural oils which, combined with other ingredients by means of a yet unknown technique, formed an entirely new compound in which even modern analyzers failed to detect traces of the original ingredients. That is why all attempts to solve the mystery of the varnish failed. Vasily Khvostenko also came to the conclusion that the wax-based paint undergoes a mysterious transformation.

An encaustic work can be readily identified without any sophisticated analytical techniques. A stone coated with the varnish can lie in the ground for thousands of years and still preserve its characteristic sheen. Any cut on its surface would gradually knit. An ideal application for a varnish of the kind would be as a polish for parquet floors.

Still in liquid form, the varnish fills in all the microscopic cracks on the surface of any article it protects. If you saw a piece of a wooden figurine coated with it, you will see that even the tiniest pores are filled with it.

Another amazing property of encaustic articles is that they begin to glow, irradiated with ultra-violet light. That is something that baffles even Tatiana Khvostenko.

Encaustic work is not only of historical value. Wax paint does not spoil the appearance of the articles it covers. The varnish is such that it can cover practically any material, wood, stone, ceramics, plastics, and concrete, moreover it is imperceptible and long-lasting. The varnish is cheap. Coating one square metre costs 50-70 kopecks. Encaustic paints can be used to decorate our cities, and the varnishes to preserve works of art for generations to come.

OLEG OSIPOV

AN ARCHETYPAL MONASTERY

In three months' time the Danilov Monastery will be a venue for the celebrations marking the 1000th anniversary of the Baptism of Rus.

The bells of this oldest of Moscow's monasteries - it was built in 1285 - have rung out again after an interval of 50 years. The crumbling walls were until recently the only evidence of the existence of the once flourishing Danilov Monastery on the right bank of the Moskva River.

In recent years, until 1983, there was a kindergarten on its grounds - a useful thing, no doubt, but one that has caused enormous damage to the historic buildings. When, therefore, at the request of the Russian Orthodox Church, it was transferred to the Moscow Patriarchate with a view to establishing the administrative centre of the Russian Orthodox Church there, it was decided that it would have to be rebuilt.

A jubilee commission on the restoration of the Danilov Monastery was set up at the Holy Synod. Archimandrite Evlogy, a Professor at the Moscow Theological Academy, who is the monastery's Father Superior, was charged with overseeing the work of reconstruction. The Russian Orthodox Church provided millions of rubles for the reconstruction. There were private donations, too, and one Moscow pensioner contributed 5,000 rubles.

By 1987, thanks to the efforts of architects, art critics and builders, the monastery had regained the appearance it had had in the 17th-19th centuries. Although the restoration of the walls is not yet finished, one can easily imagine how beautiful this architectural gem will be in the summer when the work is completed. The Danilov Monastery comprises Trinity Cathedral, built in 1838 according to Bove's design, the Church of the Intercession, begun in the 17th century, and the three-tiered bell-tower of

the St. Simeon Stylites gateway church, rebuilt according to a blurred photo taken at the beginning of this century, the only one left to go by.

With the three churches now functioning, final preparations are being made for the divine service that will be the culmination of the celebrations to mark the 1000th anniversary of the conversion of Rus to Christianity. Here is what the monk Mephody, who is responsible for guest reception at the Moscow Patriarchate, had to say:

The celebrations will begin on June 5 with a divine service at the Patriarchal Cathedral of the Epiphany, and will continue till June 12, the day of remembrance of all Russian saints. On that day the monastery will be visited by over a thousand foreign guests - heads of the Orthodox and other Churches and representatives of all dioceses. We are planning to organize a gala recital of church music in the evening. During the week, divine services will be conducted in all Moscow churches, and on June 11, vespers will be held at all levels of the Orthodox Church. On June 6-9, the Local Council of the Russian Orthodox Church - the supreme religious body - will assemble at the St. Sergius Trinity Monastery. It will discuss the all-important questions of the activity of the Orthodox Church, including the canonization of new Russian saints and the adoption of new Church Rules. On June 10, a gala event will be held in the concert hall of the Hotel Rossia. Celebrations will then be held in Kiev, Leningrad and Vladimir and, since June 18, in all dioceses. This year's jubilee will be of international significance. Three international theological conferences held in three of our

biggest cities late last year and early this year have already been devoted to it.

The monks at the Danilov Monastery are now busy compiling and arranging material on the history of the monastery.

...In 1282, the small wooden church of Daniil Stylites, the heavenly guardian of Prince Daniil Alexandrovich of Moscow (the younger son of Alexander Nevsky), was built on the site of the Danilov Monastery. During Prince Daniil's lifetime, Rus laboured under the Tartar-Mongol yoke. The internecine wars weakened the already exhausted country. The gentle and peace-loving Daniil effectively laid the foundations for the unification of all the Russias. He died in 1303, having taken monastic vows before dying. In compliance with his will, he was buried in a common grave at the monastery's cemetery.

In 1330, his son, Grand Prince Ivan Danilovich, nicknamed "Kalita," transferred the community almost in its entirety to the Kremlin where a monastery was founded at the Church of the Transfiguration ("The Saviour in the Woods"), known as the Savior Monastery. In the 15th century, during the reign of Grand Prince Ivan III of Moscow, the monastery was again transferred - this time to Krutitsky Hill overlooking the Moskva River, and renamed the New Monastery of the Savior. It was one of the best-appointed monasteries of the capital.

However, for almost two and a half centuries thereafter the Danilov Monastery was on the decline.

Its first renaissance dates from 1547, when Tsar Ivan the Terrible decreed the building of a two-storey church and a hostel. Ancient chronicles contain legends to the effect that the tsar was visited in his dreams by Prince Daniil, who reproached him for having neglected the monastery undeservedly. Ivan the Terrible then

brought together a great many monks, who prayed over the site of Prince Daniil's grave. On his decree, a cathedral of white stone was built on the site in honour of the Holy Fathers of the Seven Ecumenical Councils. By the mid-17th century, the monastery had reached the acme of its prosperity.

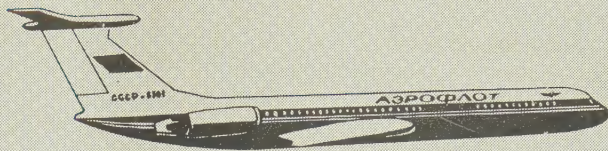
The history of St. Daniil's is full of tragic events. In 1591, during a surprise attack on Moscow by the Crimean Khan Kaza-Girey, it played the part of a defensive outpost. In 1606, a battle occurred at its walls between the peasants led by Ivan Bolotnikov and the army of Prince Vassili Shuisky. In 1610, fleeing Moscow, the second False Demetrius burned it down. But it was rebuilt. Leaving Moscow, the soldiers of Napoleon took with them the silver setting from the tomb of St. Daniil of Moscow. In the mid-19th century, cholera patients were brought there for treatment. And during the Russo-Turkish war, the monastery's sick quarters were turned into a military hospital. There was a day in the history of the monastery when only one man - the Father Superior - miraculously survived a terrible epidemic.

"The archetypal monastery," Muscovites used to say of St. Daniil's. In the early 20th century, it was famed for its strict adherence to Church Rules, its excellent choir, its library and its printing house. It was a repository of ancient Russian manuscript books, most of which are now in the Lenin State Public Library.

Work is under way in the monastery's workshop to restore icons for the main iconostasis of the Church of the Holy Fathers of the Seven Ecumenical Councils. These 18-century icons of the northern school had been transferred to the St. Sergius Trinity Monastery.

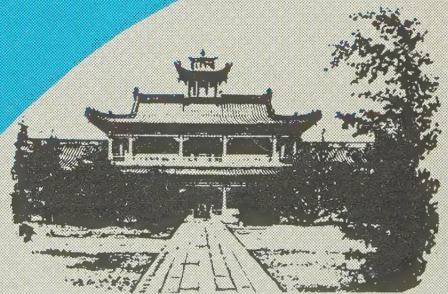
The restoration work, or rather the second renaissance of the Danilov Monastery, is nearing completion.

OLGA PAPKOVA

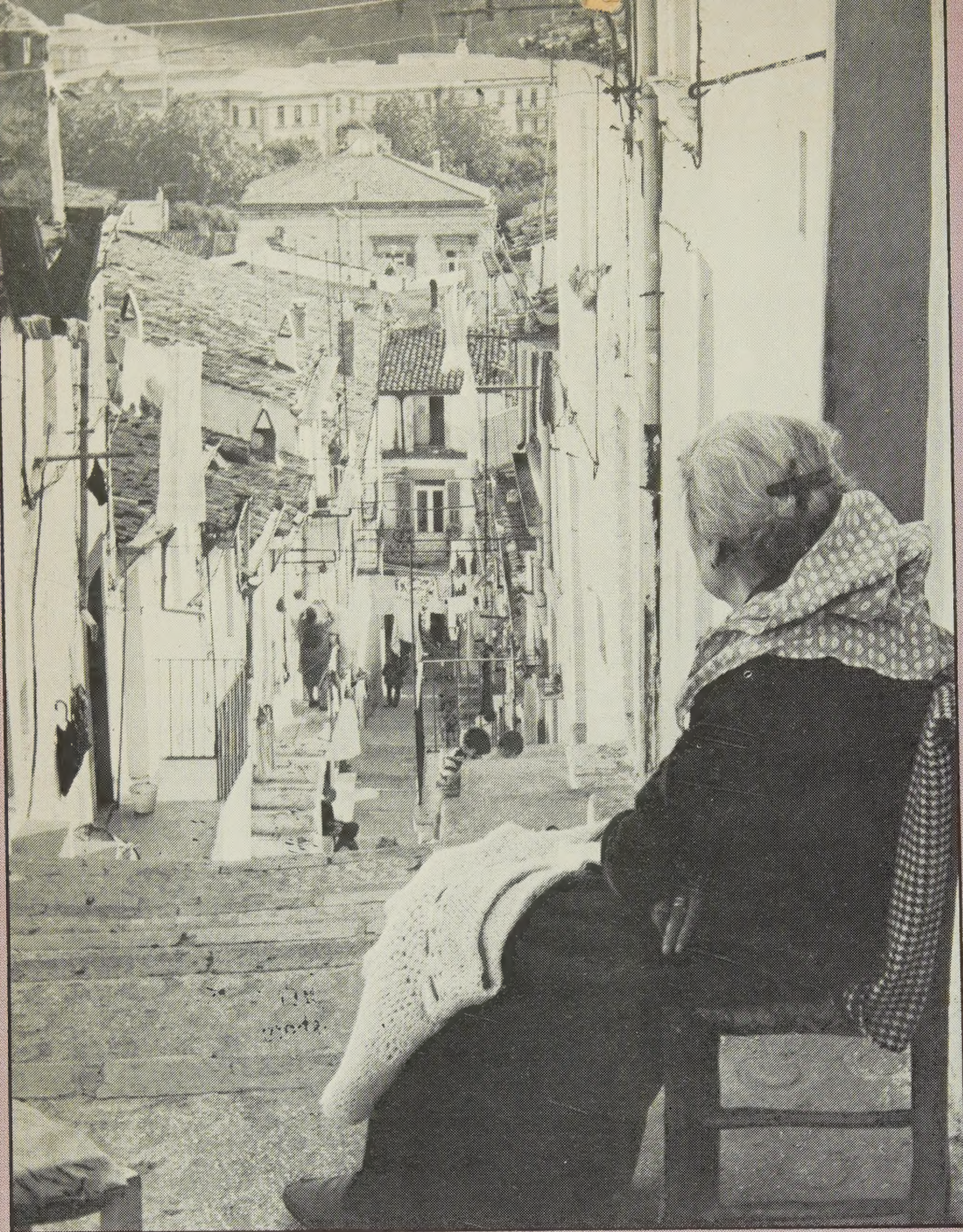


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